

Consultation paper | CP 20.02

November 2020

Implementation of the Basel III Final Reform Package



HONG KONG MONETARY AUTHORITY

香港金融管理局

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I INTRODUCTION

1 Overview

- 1 The Basel III reforms are the Basel Committee on Banking Supervision (“BCBS”)’s key response to the global financial crisis. Their aim is to address the shortcomings of the pre-crisis regulatory framework including, among others, insufficient high-quality capital, excessive and pro-cyclical build-up of leverage, imprudent liquidity management, high concentration of exposures, as well as “Too Big to Fail” of global systemically important banks (“G-SIBs”).
- 2 In terms of regulatory capital requirement, the Basel III reforms started off with the publication in December 2010 (subsequently revised in June 2011) “*Basel III: A global regulatory framework for more resilient banks and banking systems*”¹ (“June 2011 Basel document”) to, inter alia, (i) raise the quality, consistency and transparency of the capital base, (ii) enhance risk coverage, (iii) supplement the risk-based capital requirement with a leverage ratio, (iv) reduce pro-cyclicality and promote countercyclical buffers, and (v) address systemic risk and interconnectedness. The standards set out in the June 2011 Basel document have already been incorporated in our local legislations.
- 3 On 7 December 2017, the BCBS issued the document “*Basel III: Finalising post-crisis reforms*”² (“Basel III final reform package”). A key objective of the Basel III final reform package is to reduce excessive variability of risk-weighted assets which might affect the credibility and comparability of the reported risk-weighted capital ratios among banks.
- 4 In summary, the Basel III final reform package introduced the following revisions to the existing capital framework:
 - (i) Credit risk - standardised approach: (1) improve granularity and risk sensitivity calibration of credit exposures and (2) reduce excessive reliance on external credit rating, with a more granular approach for unrated exposures;
 - (ii) Credit risk - internal ratings-based approach (“IRB approach”): (1) constrain the use of internal models where appropriate (e.g. due to insufficient data to model portfolios with low-default history); (2) impose minimum floor values

¹ Please refer to <https://www.bis.org/publ/bcbs189.pdf>.

² Please refer to <https://www.bis.org/bcbs/publ/d424.pdf>.

for bank estimates; and (3) specify more refined requirements on estimation practice of banks;

- (iii) Credit valuation adjustment (“CVA”) framework: remove the internally modelled approach and introduce a revised standardised approach;
- (iv) Operational risk: replace the existing internal model based approach (currently not adopted in Hong Kong) and two standardised approaches by a single non-model based revised standardised approach with parameters more indicative of operational risk;
- (v) Output floor: introduce a revised standardised approach-based output floor to limit capital benefits from the use of internal models (relative to using standardised approaches only); and
- (vi) Leverage ratio: introduce some revisions to the leverage ratio framework, viz., a new leverage ratio buffer for GSIBs and a few technical adjustments to the original text.

5 Closely associated with the Basel III final reform package is the revised market risk framework which addresses outstanding structural shortcomings in the existing framework. The main changes include (1) further specifications for the scope of application designed to reduce incentives for regulatory arbitrage between the trading book and the banking book; (2) a revision of the Internal Models Approach (“IMA”) to better capture tail risks and market illiquidity risks; and (3) the introduction of a new standardised approach that is more risk-sensitive to serve as a credible fallback to the IMA.

6 According to the original BCBS timetable, the above revised standards will take effect from 1 January 2022 with a phase-in period of 5 years. However, in order to provide additional operational capacity for banks and supervisors to respond to the immediate financial stability priorities resulting from the impact of the coronavirus disease on the global banking system, the implementation will be deferred by one year to start from 1 January 2023³, with the output floor to be phased in over 5 years as follows:

³ Please refer to <https://www.bis.org/press/p200327.htm>.

Date	Output floor ⁴
1 January 2023	50%
1 January 2024	55%
1 January 2025	60%
1 January 2026	65%
1 January 2027	70%
1 January 2028	72.5%

- 7 For the revised market risk framework, locally incorporated authorized institutions (“AIs”) will be required to implement it for reporting purposes by 1 January 2023. The local implementation of the actual capital requirements based on the new framework will be no earlier than 1 January 2023. Its timing will take into account the implementation progress observed in major jurisdictions. The local implementation timeline of the revised CVA framework will be aligned with that of the revised market risk framework in terms of reporting and actual capital requirements.
- 8 The aim of this consultation paper (“CP”) is to consult the industry on the proposed approach of the Hong Kong Monetary Authority (“HKMA”) to implementing the Basel III final reform package in respect of standards included in the package, other than those in relation to the revised market risk framework and the revised CVA framework which, together with other standards (such as the disclosure requirements associated with the package), have been / will be the subject(s) of separate consultation(s)⁵. The policy proposals contained in this CP have taken into consideration the outcome of a quantitative impact study (“QIS”) on selected locally incorporated AIs.
- 9 The consultation will close on 6 January 2021.

⁴ At national discretion, supervisors may cap the increase in a bank’s total risk-weighted assets that results from the application of the output floor during its phase-in period at 25% of a bank’s internally calculated risk-weighted assets before the application of the floor.

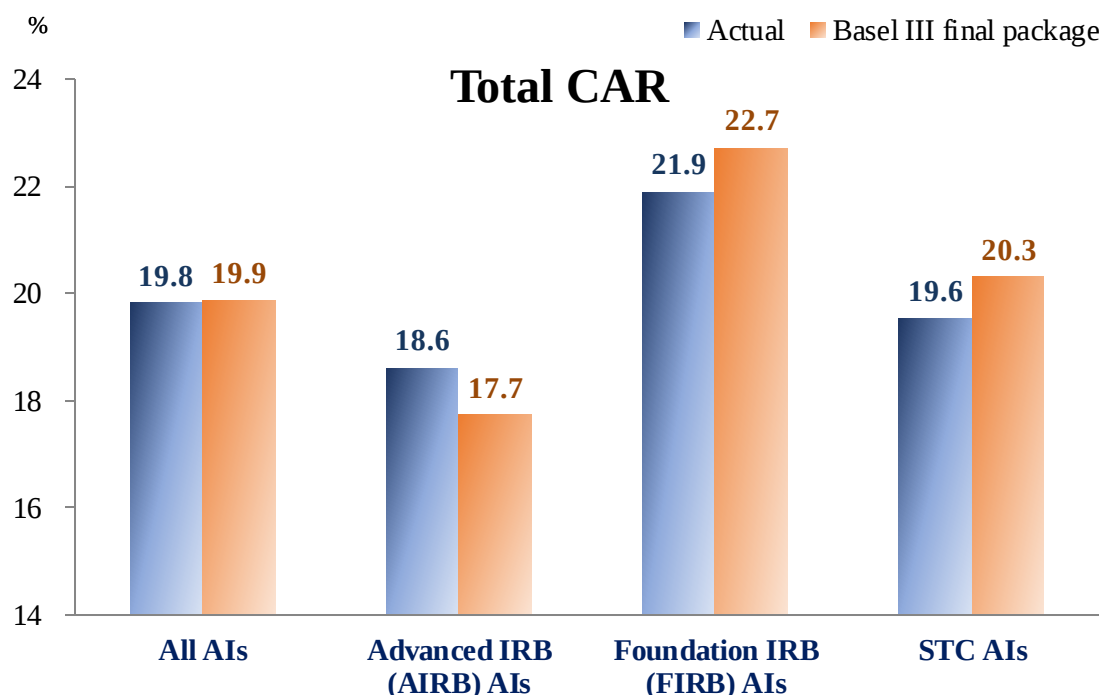
⁵ The HKMA issued a consultation paper sets out its proposal for the revised market risk framework on 28 June 2019 (see https://www.hkma.gov.hk/media/eng/regulatory-resources/consultations/CP19_01_Market_Risk.pdf).

2 Structure of this Consultation Paper

- 10 Part II of this CP sets out the overall results of the local QIS referred to in paragraph 8. Where appropriate, the HKMA has taken into account the results in the policy proposals in respect of standards included in the Basel III final reform package as set out in Part III to Part VIII of this CP:
- (i) Part III – the revised standardised approach for credit risk;
 - (ii) Part IV – a revised basic approach for credit risk (retained from the current framework incorporating certain modifications to align with the revised standardised approach for credit risk, which are retained for use by the current users of the basic approach);
 - (iii) Part V – the revised internal ratings-based approach for credit risk;
 - (iv) Part VI – the revised operational risk framework;
 - (v) Part VII – the output floor; and
 - (vi) Part VIII – the revisions to the leverage ratio standard.
- 11 Finally, Part IX sets out the proposed work plan (with timeline) for implementing the Basel III final reform package in Hong Kong.

II LOCAL QIS

- 12 To inform policy formulation, the HKMA conducted in 2019 a local QIS on 21 locally incorporated AIs (consisting of 13 standardized (credit risk) approach (“STC”), 5 foundation IRB approach (“FIRB approach”) and 3 advanced IRB approach (“AIRB approach”) users) to gauge the impact of the Basel III final reform package on AIs in respect of credit risk and operational risk. The results, which varied for AIs using different approaches, are summarised in the chart below.



- 13 For the 13 STC AIs, they generally reported a better capital position under the Basel III final reform package, with an increase of total capital adequacy ratio (“CAR”) of 0.76 percentage points on average. Detailed breakdown shows that this mainly comes from decreases in risk-weighted amounts (“RWAs”) for bank exposures, residential mortgage loans (“RMLs”) and commercial real estate exposures⁶. In fact, amid the increase in granularity and risk sensitivity, the revised standardised approach for credit risk is somehow looser than our existing rules on some key asset classes. Hence, in order to uphold our prudential standard, our policy direction is to adopt a relatively more conservative stance in a couple of areas (such as those in relation to the risk-weight calibration and national discretions for RMLs).

⁶ The decreases in RWAs in these portfolios are mainly due to more relaxed risk-weight calibrations.

- 14 For the three AIs using the AIRB approach, QIS results show that total CAR decreased by 0.88 percentage points on average, mainly because of the operation of the output floor and the mandatory migration of bank exposures from the AIRB approach to the FIRB approach. Thus, the policy direction is to provide flexibility (to the extent allowed under the revised IRB approach and our local rules) for such AIs to alleviate their adjustment burdens.
- 15 For the 5 FIRB AIs, they reported a better capital position under the Basel III final reform package (increase of average total CAR by 0.82 percentage points), partly due to the relaxation of some FIRB specific requirements⁷. Thus, in consideration of providing more flexibility for AIRB AIs, it needs to be balanced against the impact on FIRB AIs in order to avoid unintended excessive capital release if such flexibility also applies to FIRB AIs.

⁷ For instance, the reduction of the supervisory loss given default (“LGD”) for unsecured exposures to corporates that are not financial institutions from 45% to 40% (which in effect translates into an 11% reduction in IRB RWA).

III REVISED STANDARDISED APPROACH FOR CREDIT RISK

1 Introduction / overview

- 16 The Basel III final reform package retained with revisions the external ratings-based standardised approach for credit risk (“SACR”) and the IRB approach for the calculation of capital requirement of a bank’s credit (i.e. non-securitisation) risk exposures. This part highlights the key revisions to the existing SACR and the HKMA’s proposed approach to implementing them. Proposals in relation to the revised IRB approach, including the migration of certain portfolios to the revised SACR as mandated by the Basel III final reform package, will be the subject of Part V. The basic approach (“BSC”) under the existing local framework is also proposed to be retained with certain modifications, which will be discussed in Part IV.
- 17 The revised SACR includes different sets of risk-weighting requirements for certain portfolios, respectively to cater for jurisdictions that allow the use of external ratings for regulatory purposes and those that do not. For banks incorporated in jurisdictions that allow the use of external ratings for regulatory purposes (including Hong Kong), due diligence is necessary to assess whether the risk-weight applied is appropriate and prudent⁸.
- 18 In this part, for the sake of clarity, “existing SACR” and “revised SACR” refer to the standardised approach for credit risk as set out in the Basel capital framework before and after the revisions pursuant to the Basel III final reform package; whereas “existing STC” and “revised STC” refer to the standardised approach for credit risk as implemented currently and in future (i.e. to reflect the revised SACR) under the Banking (Capital) Rules (“BCR”).

2 Proposed modifications to risk-weighting methodology

- 19 Apart from certain areas, the portfolio classification and the risk-weighting methodology under the revised SACR generally follow those of the existing SACR, albeit with some modifications. The following highlights, for each portfolio and main component of the revised SACR, the key modifications over the existing SACR and our proposed approach to implementing them. As in the case of the existing SACR, there

⁸ This requirement does not apply to exposures to sovereigns and non-central government public sector entities – see CRE20.4 to CRE20.6 of the 2022 version of the consolidated Basel Framework (https://www.bis.org/basel_framework/chapter/CRE/20.htm?inforce=20220101).

are areas of national discretion under the revised SACR. For the purpose of this CP, the general presumption is that any area of national discretion brought forward from the existing SACR will continue to be exercised in the current manner, and the following content will only focus on those areas that are newly introduced in the revised SACR. Likewise, local treatments in the existing STC (i.e. that do not form part of the existing SACR and/or the revised SACR) are assumed to remain applicable unless otherwise proposed in this CP.

2.1 Exposures to sovereign, non-central government public sector entities and multilateral development banks

20 The treatment for exposures to sovereign and non-central government public sector entities is essentially unchanged from Basel II. The treatment to sovereign exposures is currently the subject of a separate review by the BCBS⁹.

21 The risk-weight table for exposures to multilateral development banks (“MDBs”) not eligible for 0% risk-weight is revised as follows to align with the External Credit Risk Assessment Approach (“ECRA”) for exposures to banks (please see section 2.2 on “Exposures to banks”) except that, unlike exposures to banks, a flat 50% risk weight is applied to unrated exposures:

External rating of counterparty	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
“Base” risk-weight	20%	30%	50%	100%	150%	50%

22 Currently, multilateral entities meeting the definition of MDBs in existing SACR but not qualified for 0% risk weight are not specified under Banking Ordinance (“BO”) as MDBs, and are treated as corporates under the BCR. This is more stringent than Basel II (which treats them as banks). The HKMA proposes to follow the new risk-weighting table introduced in the revised SACR for multilateral entities currently not specified under the BO.

⁹ Please refer to <https://www.bis.org/bcbs/publ/d425.htm>.

2.2 Exposures to banks

23 As a jurisdiction allowing the use of external ratings for regulatory purposes, Hong Kong will follow the ECRA¹⁰. The ECRA follows “Option 2” (i.e. “bank-specific ratings-based”) of the existing SACR except that:

- (i) for any single-A rated exposure, the corresponding risk-weight is 30% instead of 50%;
- (ii) any unrated exposure must follow the treatment of the Standardised Credit Risk Assessment Approach (“SCRA”) designed under the revised SACR for jurisdictions that do not allow the use of external ratings for regulatory purposes. The SCRA categorises exposures into three grades (Grade A, Grade B and Grade C) based on their respective levels of risk as characterised, inter alia, by their positions vis-à-vis published regulatory requirements. The three grades are mapped into three corresponding risk-weights (40%/75%/150% for long-term and 20%/50%/150% for short-term exposures). Two exceptional treatments under the SCRA are:
 - (a) long-term exposures to banks satisfying all the requirements for Grade A classification may receive a risk-weight of 30%, provided that the counterparty bank has a Common Equity Tier 1 capital ratio and a Tier 1 leverage ratio (“LR”) which meets or exceeds 14% and 5% respectively; and
 - (b) to reflect transfer and convertibility risk, where an exposure to a bank is not denominated in the local currency of the bank’s jurisdiction of incorporation (or the local currency of the bank’s branch in a foreign jurisdiction where the exposure is booked), the applicable risk-weight must not be lower than the risk weight applicable to exposures to the sovereign of the country where the bank is incorporated.
- (iii) the original maturity of exposures arising from the movement of goods across national borders that are eligible for the preferential risk-weights applicable to short term exposures is extended to “six months or less” (from “three months or less” under the existing SACR).

24 The HKMA proposes to fully follow these revisions for the treatment of exposures to banks.

¹⁰ The underlying precondition for the use of the approach is that the external ratings must not incorporate assumptions of implicit government support, unless the rating refers to a public bank owned by its government (this exception is not applicable to Hong Kong save the cases where the rating refers to a public bank owned by the government of another jurisdiction).

25 Two areas of national discretion are available in the risk-weighting framework for exposures to banks:

- (i) The discretion to allow banks belonging to the same institutional protection scheme (such as mutual, cooperatives or savings institutions) to apply a lower risk weight to their intra-group or in-network exposures, which is not applicable in Hong Kong in the absence of any such scheme locally.
- (ii) Regarding the discretion to allow the use of external ratings which incorporate assumptions of implicit government support for up to a period of five years, subject to any practical difficulties the industry may identify, the HKMA is considering the necessity and will welcome comments from the industry.

2.3 Exposures to covered bonds

26 While Hong Kong does not presently have a legal framework for covered bonds, Als may invest in covered bonds issued by banks or mortgage institutions in other jurisdictions. Recognising the collateralisation in covered bonds, the Basel III final reform package provides for risk-weighting scales (a rated and an unrated) that are generally more preferential than those available to unsecured exposures to the same counterparties. Nevertheless, the application of the risk-weighting scales are subject to the underlying assets (the cover pool) in a covered bond meeting certain eligibility criteria¹¹, and the investing bank satisfying the national supervisor its ability to meet certain information requirements¹².

27 The HKMA proposes to introduce exposures to covered bonds as a new exposure type into the BCR, following the same risk-weighting treatment and associated criteria as set out in the Basel III final reform package.

2.4 Exposures to securities firms and other financial institutions

28 Under the existing STC, an exposure to a securities firm is treated as an exposure to a bank provided that the firm is either a licensed corporation in Hong Kong or otherwise supervised by a securities regulator and subject to supervisory arrangements on capital adequacy comparable to those applicable to Als. Exposures to other financial institutions (including insurance companies) are treated as exposures to corporates. In addition to exposures to securities firms, the revised SACR allows exposures to

¹¹ See CRE20.34 to CRE20.36 of the 2022 version of the consolidated Basel Framework.

¹² See CRE20.37 of the 2022 version of the consolidated Basel Framework.

other financial institutions to be treated as exposures to banks provided that these institutions are subject to prudential standards and level of supervision equivalent to those applied to banks (including capital and liquidity requirements).

- 29 The HKMA proposes to follow the revised SACR for the treatment of exposures to securities firms and other financial institutions based on the criteria set out in the Basel III final reform package. It is therefore proposed that for rated exposures to non-bank financial institutions that are subject to a comparable regulatory regime, the risk-weighting treatment for bank exposures under ECRA will apply. For unrated exposures to these non-bank financial institutions, a flat risk-weight of 100% will apply (i.e. instead of a risk-weight determined based on the SCRA which is generally not applicable to non-bank financial institutions). Exposures to other non-bank financial institutions will be subject to the same risk-weighting treatment as corporate exposures.

2.5 Exposures to corporates

- 30 Hong Kong will follow the external ratings-based approach for exposures to corporates as set out in revised SACR, under which exposures are sub-divided into general corporate exposures and (the newly-introduced) specialized lending (sub-categorised into project finance, object finance and commodities finance following the definitions of the existing IRB)¹³. Under the revised SACR,
- (i) the risk-weighting of general corporate exposures (other than subordinated debts) follows the existing methodology except that:
 - for any exposure rated between BBB+ and BBB-, the risk-weight to be applied is 75% instead of 100%; and
 - for unrated exposures to corporates that will fall within the new exposure subclass of “exposures to corporate small and medium entities (“SMEs”)”¹⁴ introduced into the revised SACR, the corresponding risk-weight is 85% instead of 100%;
 - (ii) for rated specialized lending exposures, risk-weights must be determined by the *issue-specific* ratings, while issuer ratings must not be used;

¹³ See CRE20.48 and CRE20.49 of the 2022 version of the consolidated Basel Framework.

¹⁴ A new definition of “corporate SMEs” (viz. *corporate exposures where the reported annual sales for the consolidated group of which the corporate counterparty is a part is less than or equal to €50 million for the most recent financial year*) was introduced into the revised SACR, which largely tracks the same definition under the IRB approach that has been in place since Basel II.

- (iii) for unrated specialized lending exposures, the risk-weights applicable are 100% for object and commodities finance exposures and project finance exposures during operational phase, and 130% for project finance exposures during pre-operational phase; and
 - (iv) subordinated debts to corporates will no longer be risk-weighted according to their issue-specific ratings, but instead receive a flat 150% risk-weight (see section 2.6 below).
- 31 The HKMA proposes to follow the revised SACR for the treatment of exposures to corporates.

2.6 Subordinated debt, equity and other capital instruments

- 32 Under the existing STC,
- (i) both senior debts and subordinated debts issued by financial sector entities or corporates are risk-weighted by mapping issuer or issue specific ratings to the same risk-weight table; and
 - (ii) equities are risk-weighted at 100%.
- 33 Notwithstanding the above treatments,
- (i) for any amounts of capital instruments or non-capital LAC liabilities (including those in the form of subordinated debt) issued by financial sector entities that are not deducted from regulatory capital (“relevant amounts”), they must be risk-weighted at 100% or 250%, as the case requires; and
 - (ii) for holdings of shares that are significant exposures to commercial entities¹⁵, any amounts of the holdings not required to be deducted but exceeding the applicable threshold is risk-weighted at 1250%.
- 34 The revised SACR made the following changes to the treatments mentioned in paragraph 32(i) and (ii) above:
- (i) subordinated debts¹⁶ and capital instruments other than equities must be risk-weighted at 150%, regardless of whether there are issuer or issue specific ratings or not;

¹⁵ These refer to holdings of shares in commercial entities to which §68A of the BCR applies.

¹⁶ Non-capital LAC liabilities issued by financial sector entities that are not deducted from regulatory capital are treated as subordinated debts for risk weighting purposes under the revised SACR.

- (ii) the existing definition of “equity exposure” used in the IRB approach, which is based on the economic substance of the instrument concerned, is introduced into the revised SACR;
- (iii) speculative unlisted equity exposures¹⁷ must be risk-weighted at 400%; and
- (iv) other equity exposures must be risk-weighted at 250%.

The treatments in subparagraphs (iii) and (iv) will be subject to a five-year linear phase-in arrangement from the date of implementation of the revised SACR.

35 As a result, the treatment for the relevant amounts referred to in paragraph 33(i) that are currently risk weighted at 100% will be revised as follows:

- (i) relevant amounts of capital instruments that are equities must be risk-weighted at 400% or 250%, as the case requires; and
- (ii) relevant amounts of non-capital LAC liabilities and capital instruments other than equities must be risk-weighted at 150%.

The treatment for the relevant amounts referred to in paragraph 33(i) that are currently subject to 250% risk-weight will remain unchanged. In other words, the two new risk weights introduced for equity exposures do not apply.

36 Regarding the five-year linear phase-in arrangement referred to in paragraph 34, seeing that its impact is expected to be insignificant, we intend to consult the industry on whether the arrangement should be made available. However, as there is also a five-year linear phase-in arrangement designed under the revised IRB approach for migration of the treatment of equity exposures from the IRB approach to the revised SACR (please see paragraph 78 in Part V), we would propose that both the revised STC and the revised IRB approach should be subject to the same arrangement (i.e. there would not be a case where phase-in is allowed under one calculation approach but is not allowed under another calculation approach).

37 The revised SACR also incorporates a national discretion allowing banks to assign a risk-weight of 100% to equity holdings made pursuant to national legislated programmes (that provide significant subsidies for the equity investments to the banks and involve government oversight and restrictions on the equity investments), which is not relevant to Hong Kong.

¹⁷ See definition of “speculative unlisted equity exposures” in CRE20.58 of the 2022 version of the consolidated Basel Framework.

2.7 Retail exposures

38 The new key elements in the risk-weighting framework for retail exposures introduced under the revised SACR are:

- (i) to qualify for regulatory retail exposures, the granularity criterion that no aggregated exposure to one counterparty can exceed 0.2% of the overall regulatory retail portfolio (not a requirement in the existing STC) becomes a mandatory requirement;
- (ii) for regulatory retail exposure to any obligor who qualifies as “transactors”¹⁸, the corresponding risk-weight can be lowered from the standard 75% to 45%;
- (iii) for unhedged¹⁹ retail exposures to individuals where the lending currency differs from the currency of the borrower’s source of income (i.e. in the case of exposures denominated in Hong Kong Dollar (“HK\$”), any currency other than HK\$), a risk-weight multiplier of 1.5 times will be applicable; and
- (iv) exposures to SMEs that do not fulfil all the criteria for regulatory retail exposures will be treated as corporate SMEs exposures and attract a risk-weight of 85% instead of 100% (as unrated corporate or other exposures).

39 The HKMA proposes to adopt the above in the revised STC, together with the size criterion of defining an SME under the revised SACR, viz., €50 million (translated as HK\$500 million) consolidated group annual sales. This size criterion aligns with the corresponding threshold under the IRB approach and will replace the current criteria for defining “small business” under the existing STC (which include a lower (HK\$100 million) threshold, credit information requirement, etc., that track the local commercial credit reference agency framework).

2.8 Real estate exposure class

40 The revised SACR contains two real estate-related exposure classes, namely claims secured by residential real estate (“RRE class”) and claims secured by commercial real estate (“CRE class”). The major highlights of the revised SACR include:

- (i) more elaborate eligibility criteria (in terms of nature of property, legal enforceability, mortgagee rights, repayment ability, property valuation,

¹⁸ Transactors are obligors in relation to facilities such as credit cards and charge cards where the balance has been repaid in full at each scheduled repayment date for the previous 12 months, or to overdraft facilities if there has been no drawdown over the previous 12 months.

¹⁹ See CRE20.93 of the 2022 version of the consolidated Basel Framework for a definition of “unhedged exposure”.

required documentation, etc.) for exposures to be treated as qualifying exposures;

- (ii) a risk-weighting scale for qualifying residential real estate exposures (ranging from 20% to 70%) based on the loan-to-valuation (“LTV”) ratio of a loan instead of a flat 35% risk-weight. The LTV ratio of a loan is calculated based on its amortised value, having regard to any adjustments to the property value at loan origination (please also see paragraph 44(iii) below);
- (iii) a risk-weighting treatment for qualifying exposures secured by commercial real estate based on the LTV ratio of the loan and the risk-weight of the counterparty instead of a flat 100% risk-weight;
- (iv) the classification of exposures into “income-producing residential real estate” (“IPRRE”) and “income-producing commercial real estate” (“IPCRE”) exposure subclasses if repayment of the exposures is “materially dependent” on cash flows generated by the properties concerned. These new subclasses are akin to the income-producing real estate sub-class of specialized lending in the IRB approach. The corresponding risk-weighting scale of qualifying IPRRE exposures (ranging from 30% to 105%), and that of qualifying IPCRE exposures (ranging from 70% to 110%), are designed based on the LTV ratio of the loan. Regarding the criteria on how material dependence should be assessed, the HKMA intends to follow the example set out in the revised SACR (i.e. where more than 50% of the income from the borrower used in the bank’s assessment of the borrower’s ability to service the loan is from cash flows generated by the property);
- (v) the introduction of a “land acquisition, development and construction exposures” (“ADC”) subclass, which is similar to the high-volatility commercial real estate sub-class of specialized lending in the IRB approach, and will be subject to a flat risk-weight of 150% (or 100% if the designated criteria are fulfilled²⁰);
- (vi) for unhedged RRE exposures to individuals where the lending currency differs from the currency of the borrower’s source of income (i.e. in the case of loans made in HK\$, any currency other than HK\$), a risk-weight multiplier of 1.5 times will be applicable; and
- (vii) for a loan covered by mortgage insurance, the risk-weight to be applied to the uncovered portion is the one corresponding to the “gross” LTV of the loan (i.e. calculated based on the gross loan amount including the covered and the

²⁰ See CRE20.91 of the 2022 version of the consolidated Basel Framework.

uncovered portions). This contrasts with the existing STC where the risk-weight is the one corresponding to the “net” LTV of the loan (i.e. calculated based on the uncovered portion of the loan amount).

- 41 In general, the HKMA intends to adopt the new eligibility criteria and portfolio classification, together with the minimum risk-weights for asset classes other than qualifying RRE exposures falling within the RRE class. For the RRE class, the risk-weights for qualifying RRE exposures under the revised SACR were calibrated largely with reference to the LTV level in other major jurisdictions which are noticeably higher than that in Hong Kong (current LTVs of RMLs should largely be under 60%). The minimum risk-weights under the revised SACR would likely be noticeably lower than the 35% risk-weight under the existing STC. This, together with the high volatility of the local property market and the lack of a commensurate significant reduction of risks associated with residential mortgage lending, would suggest that it is appropriate to implement a more prudent risk-weight calibration that approximates the capital requirement of these classes. On balance, the HKMA therefore proposes to adjust the risk-weighting scales by a “1 notch shift” to the right as follows:

1 notch shift	LTV ≤ 50%	50% < LTV ≤ 60%	60% < LTV ≤ 80%	80% < LTV ≤ 90%	90% < LTV ≤ 100%	LTV > 100%
RRE that is not IPRRE	25%	30%	40%	50%	70%	70%
IPRRE	35%	45%	60%	75%	105%	105%

- 42 The adjusted risk-weighting scales above are considered appropriate as they would operate to help:
- (i) address potential concerns regarding excessive capital release due to the application of the standards set out in the Basel III final reform package²¹ (as mentioned in Part II, applying such standards would result in potentially large capital savings on SACR on the same credit portfolios) which would not be desirable given the historical volatility of property prices; and

²¹ Any change in the capital requirements of the revised SACR has an impact on those of the IRB Als because of the application of output floor, which imposes a minimum amount of capital requirements on modelling banks based on RWA calculated using only the SACR (please see paragraph 104 in Part VII for more details). Therefore, if the risk-weights for RMLs under the revised SACR are to be notched up, this minimum “floor” amount of capital requirements applicable to IRB Als will get larger.

- (ii) dampen the volatility of risk-weights applicable to RMLs in property market downturns under the current LTV based mechanism given a reduced range of risk-weights after the proposed adjustment.
- 43 There are areas of local adaptations under the existing STC which the HKMA intends to either modify or retain as follows:
- (i) Under the existing STC²², the 70% LTV requirement for applying the minimum risk-weight (35%) is lowered to 90% for RMLs made by an AI to a member of its staff (“staff loans”). It is proposed that staff loans be subject to the same adjusted risk-weighting treatment as mentioned in paragraph 41 above.
 - (ii) It is proposed that the treatment under the existing STC²³ to allow an RML with a property-holding shell company as borrower to receive the same risk-weight treatment as an RML to an individual will be retained.
- 44 Other than risk-weight calibration, the revised SACR contains several areas of national discretion where two options are available for each. The HKMA would propose to adopt the more conservative option in these other areas of national discretion which are more reflective of the risks involved. These include the discretion to require banks to adjust the value of mortgaged property downwards as opposed to maintaining the value always at origination when calculating LTV, which is also the approach commonly proposed among other jurisdictions so far. Other areas are mostly to cater for specific practices of overseas jurisdictions which are not that relevant to / common in Hong Kong.
- (i) “Finished property” criterion – For simplicity, the HKMA intends not to exercise the national discretion to apply the same risk-weighting treatment as qualifying RRE exposures to loans to individuals that are secured by residential property under construction or land upon which residential property would be constructed.
 - (ii) “Claims over the property” criterion – The revised SACR allows for and sets out the necessary conditions to be met for the recognition of loans secured by “junior liens” over property or guaranteed by monoline guarantor as qualifying exposures. For simplicity, the HKMA does not intend to make these available in Hong Kong, having regard to the fact that in Hong Kong, banks commonly include “all monies” clause in the security document, rendering “junior liens” irrelevant for capital treatment of real estate exposures (in particular RMLs) in

²² See §65(2) of the BCR.

²³ See §65(1)(a)(ii) and 65(4)(a)(ii)(B) of the BCR.

Hong Kong. Also, mortgage insurance provided by monoline guarantors should not be popular in the local market.

- (iii) LTV calculation – In view of the volatile nature of the local property market, the HKMA intends to implement the national discretion to require banks to revise the property value downward as necessary²⁴ in the determination of the LTV ratio of a loan, which is consistent with the risk management practice expected of Als. If the value has been adjusted downwards, a subsequent upward adjustment can be made but not to a higher value than the value at origination.
- (iv) Loan-splitting approach – The revised SACR allows national supervisors the discretion to require banks to split exposure into two parts, each subject to a different risk-weight²⁵. The HKMA does not consider it necessary to make this available, considering that the current “whole loan” approach is more prudent and better reflects the risk management practices of the local banking industry.
- (v) “Hard test” for qualifying IPCRE exposures to be risk-weighted as qualifying CRE exposures that are not IPCRE exposures (“general CRE exposures”) – The revised SACR contains a national discretion where, subject to certain conditions being met²⁶, qualifying IPCRE exposures can be risk-weighted as general CRE exposures. A similar test is available in the existing SACR but not implemented in the existing STC for claims secured by CRE. In view of the relatively riskier nature of IPCRE exposures and in line with current approach under the existing STC, the HKMA does not intend to implement this national discretion.
- (vi) Exceptions for treating qualifying IPRRE exposures as qualifying RRE exposures that are not IPRRE exposures (“general RRE exposures”) – The revised SACR also sets out certain exceptions fulfilling which a qualifying IPRRE exposure could be treated as a general RRE exposure for risk-weighting purposes. An exception is that the properties or housing units mortgaged by an individual is limited to a certain number as specified by national supervisors. For simplicity, and given that credit risk associated with qualifying IPRRE exposure is inherently different from that associated with general RRE exposure, the HKMA does not consider it appropriate to implement this national discretion.

45 Also, same as the existing STC, for RRE exposures secured by overseas properties, it is proposed that risk-weighting treatment may follow the capital standards in those

²⁴ See CRE20.74 to CRE20.76 of the 2022 version of the consolidated Basel Framework.

²⁵ See CRE20.83 and CRE20.86 of the 2022 version of the consolidated Basel Framework.

²⁶ See footnote 39 of CRE20 of the 2022 version of the consolidated Basel Framework.

overseas jurisdictions that have likewise implemented the revised SACR under the Basel III final reform package.

2.9 *Off-balance sheet items*

46 Off-balance sheet items under the revised SACR will be converted into credit exposure equivalents through the use of credit conversion factors (“CCFs”) in the same way as the existing SACR, except that:

- (i) commitments that are unconditionally cancellable at any time by the bank without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower’s creditworthiness (“UCCs”), will receive a 10% CCF instead of 0%; and
- (ii) the CCF for commitments (except UCCs) will no longer be determined by original maturity. A flat CCF of 40% will be applied.

47 To cater for some special jurisdictional circumstances, national discretion is available where, subject to certain conditions being met²⁷, “pro forma” commitments to corporates and SMEs may be excluded from the definition of commitments. As these conditions are loosely specified and may be subject to different interpretations, the HKMA proposes not to exercise this discretion for pro forma commitments primarily due to concerns that this may induce undesirable behavioural changes by banks (if exercised based on the loosely defined conditions) or undue complexity if the HKMA is to elaborate on its supervisory interpretation of the conditions for the sake of prudential regulation.

2.10 *Defaulted exposures*

48 The revised SACR introduces a new defined term of “defaulted exposure”, which means an exposure that is past due for more than 90 days (i.e. same as the existing SACR); or an exposure to a “defaulted borrower”²⁸. The risk-weighting approach in

²⁷ As mentioned in footnote 43 of the CRE20 of the 2022 version of the consolidated Basel Framework, these conditions are: (i) the bank receives no fees or commissions to establish or maintain the arrangements; (ii) the client is required to apply to the bank for the initial and each subsequent drawdown; (iii) the bank has full authority, regardless of the fulfilment by the client of the conditions set out in the facility documentation, over the execution of each drawdown; and (iv) the bank’s decision on the execution of each drawdown is only made after assessing the creditworthiness of the client immediately prior to drawdown.

²⁸ Please see CRE20.104 of the 2022 version of the consolidated Basel Framework.

the revised SACR follows that of the existing SACR, viz., the unsecured or unguaranteed portion of a defaulted exposure must be allocated:

- (i) 150% risk-weight when specific provisions are less than 20% of the outstanding amount of the exposure;
- (ii) 100% risk-weight when specific provisions are equal or greater than 20% of the outstanding amount of the exposure; and
- (iii) at national discretion, 50% risk-weight when specific provisions are no less than 50% of the outstanding amount of the exposure.

49 The HKMA has not adopted the above approach in the existing STC but requires a flat 150% risk-weight to be applied to past due loans, a more conservative approach that is more in line with the general approach adopted by AIs for assessing credit risk of problem loans. The HKMA intends to carry forward this approach to the treatment of defaulted exposures, whilst expanding it to cover the new definition of “defaulted borrower”.

3 Qualitative requirements in relation to the use of risk-weights based on external ratings

50 It has been the HKMA’s supervisory requirement that AIs must, as part of their credit risk management framework, perform due diligence to ensure that they have an adequate understanding, at origination and thereafter on a regular basis (at least annually), of the risk profile and characteristics of their counterparties. In addition to such supervisory requirement, the revised SACR requires banks to exercise due diligence to assess whether the prescribed risk-weight based on external ratings (“base risk-weight”) applied to an exposure (other than an exposure to a sovereign or non-central government public sector entity) is appropriate and prudent given the banks’ own assessment of the credit risk of the exposure²⁹. For instance, if an AI’s own assessment suggests the credit risk of an exposure is higher than that implied by the base risk-weight under the revised SACR, the AI must assign to the exposure a risk-weight that is at least one notch higher (e.g. in the case of a corporate exposure, if the base risk-weight is 20%, the risk weight actually assigned to the exposure must be at least 50%). In any other case, the base risk-weight must be assigned to the exposure. The HKMA will consider how best to implement the due diligence requirements in

²⁹ See CRE20.4 to 20.6 of the 2022 version of the consolidated Basel Framework.

respect of appropriateness and prudence of base risk-weights, potentially through a combination of amendments to the BCR and supervisory guidance.

4 Credit risk mitigation

- 51 The credit risk mitigation (“CRM”) techniques available in the revised SACR generally follow those in the existing SACR. Changes include:
- (i) Two existing model-based options for CRM calculations, viz., own-estimates of haircuts under the comprehensive approach, and value-at-risk (“VaR”) models for certain securities financing transactions (“SFTs”), are removed³⁰;
 - (ii) The formula for calculating the net exposure amount of repo-style transactions subject to a master netting agreement is revised to better account for diversification and correlation of securities underlying these transactions;
 - (iii) The range of eligible guarantors is expanded to include prudentially regulated financial institutions other than banks and securities firms;
 - (iv) Minimum haircut floors for SFTs are introduced pursuant to Financial Stability Board (“FSB”)’s report on *“Strengthening Oversight and Regulation of Shadow Banking – Regulatory framework for haircuts on non-centrally cleared securities financing transactions”*³¹, which result in higher capital requirements for certain non-centrally cleared SFTs with certain counterparties;
 - (v) The supervisory haircuts for comprehensive approach are recalibrated with an expected shortfall model. Among other enhancements, the number of maturity buckets for “other issuers” is increased and higher haircuts are applied to equity instruments to reflect market volatility observed in the global financial crisis; and
 - (vi) As opposed to the existing SACR, first-to-default and all other nth-to-default credit derivatives are no longer eligible as a credit risk mitigation technique.
- 52 The HKMA proposes to follow the above revisions for credit risk mitigation techniques.

³⁰ Under the current BCR, own-estimates of haircuts is not available anyway and no AI is granted the supervisory approval to use VaR models for SFTs.

³¹ Please refer to https://www.fsb.org/wp-content/uploads/r_141013a.pdf. An outline of the standard is also set out in paragraphs 67 to 70 of this CP.

IV REVISED BASIC APPROACH FOR CREDIT RISK

1 Introduction / overview

- 53 The BSC in the existing framework was designed under Basel II for AIs with relatively smaller size and less complex operations (i.e. based on the criteria set out in §7 of the BCR). While we consider it appropriate to retain the approach for these AIs, we intend to propose certain modifications to the approach to align it with the revised SACR under the Basel III final reform package as described in the paragraphs below.

2 Proposed modifications to risk-weighting methodology

2.1 *Exposures to multilateral entities other than multilateral development banks*

- 54 Currently, MDBs (within the meaning given by §2(1) of the BO) are risk-weighted at 0%. Exposures to multilateral entities that are not “MDBs” are treated as “other exposures” and subject to a risk-weight of 100%. The HKMA proposes to adopt a new flat risk-weight of 50% for exposures to these multilateral entities, which is the same as the risk-weight that will be applicable to exposures to these multilateral entities under the revised SACR if the banks holding the exposures are incorporated in jurisdictions that do not allow external ratings for regulatory purposes.

2.2 *Exposures to covered bonds*

- 55 It is proposed to introduce a new exposure class of “covered bond exposures” that mimics the treatments under the revised SACR for covered bonds. Covered bonds (whether with external credit ratings or not) issued by an issuer that satisfy the same eligibility criteria as set out in the revised SACR³² will be risk-weighted in accordance with the table below based on the risk-weight that would be allocated to an unsecured exposure to the issuer³³ under section §113 of the BCR:

³² See CRE20.34 to 20.36 of the 2022 version of the consolidated Basel Framework.

³³ If the issuer is a mortgage institution that does not fall within the definition of “bank” in §2(1) of the BCR, for the purpose of risk-weighting covered bonds, a BSC AI may apply §113 as if the mortgage institution were a bank.

Risk-weight that would be assigned to an unsecured exposure to the issuer with a residual maturity of not less than 1 year under existing §113 of the BCR	20%	100%
Risk-weight applicable to covered bonds issued by the issuer	10%	50%

2.3 Exposures to RMLs

56 In view of the substantial amendments to the treatments for RMLs introduced by the Basel III final reform package, the HKMA proposes to make the following changes to the risk-weighting methodology for RMLs under the revised BSC:

- (i) Currently under the BSC, RMLs that fulfil certain criteria³⁴ are eligible for the preferential risk-weight of 50%. The HKMA intends to align these criteria with the eligibility criteria specified in the Basel III final reform package³⁵ for determining whether the preferential treatment under the revised SACR is applicable to a real estate exposure;
- (ii) RMLs satisfying the aforesaid eligibility criteria (“eligible RMLs”) will be classified into those that are income-producing RMLs (i.e. RMLs the repayment of which is “materially dependent” on the cash flows generated by the residential property concerned (e.g. lease or rental payments, or sale proceeds of the property)) and those that are not income-producing RMLs;
- (iii) The HKMA proposes to align the LTV calculation under the BSC with that to be adopted for the STC³⁶, as opposed to the current requirement that only the LTV ratio at the time when the RML was originated or purchased has a role in determining the risk-weight applicable to the RML (please see paragraph 40(ii) in Part III);
- (iv) The 50% preferential risk-weight assigned to a RML under the existing BSC will be applicable to the RML throughout its life regardless of whether there is any change in outstanding balance or property value. In order to enhance the risk

³⁴ See §115(1) of the BCR.

³⁵ See CRE20.71, CRE20.73 to CRE20.76 of the 2022 version of the consolidated Basel Framework and paragraph 44 of this CP.

³⁶ See CRE20.74 to CRE20.76 of the 2022 version of the consolidated Basel Framework and paragraph 44(iii) of this CP.

sensitivity of the risk-weighting methodology for RMLs under the BSC in a similar manner to that under the revised SACR, the HKMA intends to replace the 50% flat risk-weight with the following more granular risk-weighting scales:

	LTV ≤ 70 %	70% < LTV ≤ 90%	LTV > 90%
Income-producing RMLs	50%	70%	120%
RMLs that are not income-producing RMLs	40%	50%	100%

57 For non-eligible RMLs, it is proposed that the applicable risk-weight be set at 150%.

58 It is proposed to align the treatment of RMLs granted to Als' own staffs and property-holding shell companies under the revised BSC with that proposed in paragraph 43 for the revised STC. That is, staff loans will be subject to the same treatment as other RMLs as mentioned in paragraphs 56 and 57 and the existing treatment under the BSC of RMLs to property-holding shell companies will be retained.

2.4 *Land acquisition, development and construction exposures*

59 ADC exposures refer to loans for financing land acquisition for development and construction purposes or for financing development and constructions of any residential or commercial property. They are currently regarded as "Other exposures" and subject to 100% risk-weight under the BSC. The HKMA proposes to raise the risk-weight applicable to ADC exposures to 150% to align with the general treatment for ADC exposures under the revised SACR, but without making available the preferential risk-weight of 100% as in the case of the revised SACR when certain criteria are met³⁷.

³⁷ See CRE20.91 of the 2022 version of the consolidated Basel Framework.

2.5 Equities and subordinated debts

60 The HKMA proposes to adopt the same treatment as in the revised SACR for risk-weighting equities and subordinated debts issued by financial institutions and corporates, that is —

- (i) subordinated debts must be risk-weighted at 150%;
- (ii) speculative unlisted equity exposures must be risk-weighted at 400%; and
- (iii) other equity exposures must be risk-weighted at 250%.

61 The proposed treatment does not apply to equities and subordinated debts that will fall within paragraphs 62 and 64 below. The terms “equity exposures” and “speculative unlisted equity exposures” will be as defined in the revised SACR³⁸ and will not cover equity investments in collective investment schemes.

2.6 Capital instruments and non-capital LAC liabilities of financial sector entities

62 In line with the changes proposed to the STC, the following treatments will be applicable to capital instruments and non-capital LAC liabilities of financial sector entities that fall within the description in §116(1)(a) of the BCR (collectively referred to as “relevant regulatory items”) —

- (i) any amounts of the relevant regulatory items that are currently risk-weighted at 100% under §116(2)(a) of the BCR will be risk-weighted at —
 - (a) 150% if the relevant regulatory items are non-capital LAC liabilities or capital instruments other than equities;
 - (b) 250% if the relevant regulatory items are equities other than speculative unlisted equity exposures; and
 - (c) 400% if the relevant regulatory items are speculative unlisted equity exposures.
- (ii) any amounts of the relevant regulatory items that are currently risk-weighted at 250% under §116(2)(b) of the BCR will continue to be risk-weighted at 250%.

63 For simplicity, no phase-in arrangement will be available for the above revised treatments.

³⁸ See CRE20.53 to CRE20.56 and CRE20.58 of the 2022 version of the consolidated Basel Framework.

2.7 Holdings of shares in commercial entities

- 64 Notwithstanding the treatments for equity exposures mentioned in paragraph 60, holdings of shares in commercial entities referred to in existing §117A(1)(a) and (b) of the BCR will continue to be subject to the same requirement as currently set out in §117A(2). That is, any amount of the holdings that is not deducted but exceeds the 15% threshold specified in §117A(2) must be risk-weighted at 1250%.

3 Proposed modifications to methodology for calculating exposure amount of off-balance sheet items

- 65 The following two changes to CCFs are proposed to mirror the changes proposed to the existing STC (please see paragraph 46):

- (i) The CCF for commitments that are UCCs, will be revised to 10% from 0%.
- (ii) Commitments other than UCCs, which are currently subject to a CCF of 20% or 50%, will receive a flat CCF of 40%.

4 Proposed modifications to credit risk mitigation framework

4.1 Eligible credit risk mitigation techniques

- 66 In line with the change proposed to the CRM framework under the STC, it is proposed that, under the BSC, first-to-default and all other nth-to-default credit derivatives will no longer be eligible as a CRM technique.

4.2 Minimum haircut floors for SFTs

- 67 The FSB's report on "*Strengthening Oversight and Regulation of Shadow Banking – Regulatory framework for haircuts on non-centrally cleared securities financing transactions*" issued in October 2014 introduced a framework of numerical haircut floors for certain non-centrally cleared SFTs. The Basel III final reform package implements this framework through imposing a requirement that SFTs whose haircuts are lower than the respective floors specified in the framework will be treated as

unsecured transactions, that is, the collateral received under the SFTs are not recognised for capital purposes.

68 The haircut floors apply to—

(i) non-centrally cleared SFTs in which the financing against collateral other than government securities is provided to counterparties who are not supervised by a regulator that imposes prudential requirements consistent with international norms; and

(ii) collateral upgrade transactions³⁹ with these same counterparties,

but do not apply to SFTs entered into with central banks and certain cash-collateralised SFTs⁴⁰.

69 The following formulas are used to determine whether the haircut floors are complied with—

(i) For SFTs not subject to netting:

$$H = \frac{C_B}{C_A} - 1$$
$$f = \frac{1 + f_B}{1 + f_A} - 1$$

where —

- ◆ H is the actual haircut of the SFT concerned;
- ◆ C_B is the actual amount of collateral received by the AI;
- ◆ C_A is the actual amount of collateral lent by the AI;
- ◆ f is the effective haircut floor for the SFT; and
- ◆ f_B and f_A are the haircut floors for the collateral received and the collateral lent respectively.

The minimum haircut floor is not complied with if $f > H$.

(ii) For SFTs subject to netting:

³⁹ These refer to SFTs where the bank lends a higher quality security and receives a lower quality security.

⁴⁰ See CRE56.1 to CRE56.13 of the 2022 version of the consolidated Basel Framework (https://www.bis.org/basel_framework/chapter/CRE/56.htm?inforce=20220101) for details.

$$H_p = \frac{\sum C_t - \sum E_s}{\sum E_s}$$

$$f_p = \left[\left\{ \frac{\sum_s E_s}{\sum_s E_s \times (1 + f_s)} \right\} / \left\{ \frac{\sum_t C_t}{\sum_t C_t \times (1 + f_t)} \right\} \right] - 1$$

where —

- ◆ H_p is the actual haircut of the portfolio of SFTs concerned;
- ◆ E_s is the net position in each security (or cash) that is net lent by the AI
- ◆ C_t is the net position in each security (or cash) that is net borrowed by the AI;
- ◆ f_p is the effective haircut floor for the portfolio of SFTs; and
- ◆ f_s and f_t are the haircut floors for the securities that are net lent and net borrowed respectively.

The minimum haircut floor is not complied with if $f_p > H_p$.

- 70 Considering that the haircut floors are intended to incentivise banking institutions to enhance their risk management practices for SFTs, the HKMA is inclined to apply the haircut floors to all locally incorporated AIs including BSC AIs. As BSC AIs' exposures to SFTs are minimal, the HKMA does not expect that implementation of the haircut floors would have material impacts on BSC AIs in terms of the amount of SFTs that would be subject to the haircut floors and the overall capital positions of individual BSC AIs.

V REVISED INTERNAL RATINGS-BASED APPROACH FOR CREDIT RISK

1 Introduction / overview

71 The global financial crisis revealed some material shortcomings in the IRB approach including the excess complexity of the approach, unwarranted differences in capital outcomes across banks and jurisdictions, and concerns on the modellability of certain asset classes given data limitations (particularly the so-called “low-default portfolios” (“LDPs”)). The Basel III final reform package introduces refinements to the IRB approach (the “revised IRB approach”) to address these issues and to restore credibility in the calculation of capital requirements and comparability of banks’ capital ratios. The major changes introduced under the revised IRB approach include:

- (i) Prohibition on the use of the advanced IRB approach for LDPs including exposures to banks, other financial institutions and large corporates; and the use of the IRB approach for equity exposures (except equity investments in funds);
- (ii) Specification of new or revised input floors for bank-estimates of probability of default (“PD”), loss given default (“LGD”) and exposure at default (“EAD”);
- (iii) Removal of certain Basel II calculation methodologies and refinements to some others for greater simplicity and robustness; and
- (iv) Enhancement of estimation and data requirements.

72 Unless stated otherwise, a reference to an AI in Part V means an AI that has, or will have, the approval of the Monetary Authority (“MA”) to use the IRB approach to calculate its regulatory capital for credit risk.

2 General approach and presumptions

73 The HKMA intends to **align closely to the revised IRB approach set out under the Basel III final reform package** including, where applicable, the subsequent technical updates introduced by the BCBS (e.g. those incorporated into the consolidated Basel Framework published in December 2019⁴¹). This Part focuses on discussing the

⁴¹ Please see <https://www.bis.org/bcbs/publ/d491.htm>.

HKMA's proposals for implementing the major new or revised IRB standards the implementation of which are subject to national discretion, and areas where the HKMA believes AIs may benefit from advance clarifications of supervisory expectations and fleshing out of certain implementation details to facilitate better understanding of, and consistency in, the implementation of the Basel III final reform package in Hong Kong.⁴²

74 In addition, the HKMA proposes some modifications to **current IRB requirements in the BCR**. However, except for the proposed modifications discussed in this Part and the necessary consequential amendments pertaining to the local implementation of the Basel III final reform package, the other current BCR requirements that will remain relevant to the revised IRB approach are presumed to be carried forward.

75 **Other presumptions** for implementation of the revised IRB include:

- (i) All prevailing macroprudential measures issued by the HKMA applicable to IRB AIs (e.g. the risk-weight floors for specified exposures to property developers and residential mortgages) will continue to apply; and
- (ii) The continual application of AI-specific requirements relating to an AI's use of the IRB approach (e.g. any condition attached to the MA's approval for the AI to use the IRB approach) after the implementation of the Basel III final reform package will be subject to supervisory review with respect to the factors below, which may lead to a need to modify or rescind a specific requirement in discussion with the relevant AI:-
 - (a) *Relevance* – Whether an AI-specific requirement will be rendered irrelevant or inoperable upon implementation of the Basel III final reform package in Hong Kong; and
 - (b) *Prudence* – An AI-specific requirement must not generate capital requirements applicable to an AI that are less stringent than the outcomes of applying the revised IRB approach as implemented in Hong Kong without applying that requirement.

In a similar vein, the HKMA would also be mindful of whether the continued application of an existing AI-specific requirement to an AI may produce unintendedly large capital impacts on the AI upon implementation of the Basel III final reform package in Hong Kong.

⁴² Notwithstanding the focused scope of discussion in this Part, AIs will have opportunities to consider and comment on the full set of proposals for implementing the revised IRB approach in Hong Kong at later stages of the implementation process of the Basel III final reform package.

3 Specific proposals

3.1 *Migration of specified asset portfolios*

76 Recognising that some IRB parameters may likely be unmodellable or less amenable to reliable modelling due to lack of default or loss data, the Basel III final reform package **prohibits the use of the advanced IRB approach** in respect of exposures to banks, other financial institutions and large corporates with consolidated annual revenue greater than €500 million, and requires such portfolios be migrated to the foundation IRB approach. It is thus proposed that upon implementation of the final Basel III reform package in Hong Kong:

- (i) An AI that currently uses the advanced IRB approach for its corporate, sovereign and bank exposures must use instead the foundation IRB approach to calculate its credit risk capital requirements for the following exposure types:-
 - (a) All exposures that fall within the **IRB class of bank exposures**;
 - (b) All exposures to **financial institutions** (as defined under §157A(3) of the BCR) that fall within the IRB class of corporate exposures;
 - (c) **A corporate exposure** that does not fall under paragraph 76(i)(b) above and is not classified as a specialized lending if:-
 - (A) Subject to sub-subparagraphs (i)(c)(B) and (C) below, the corporate concerned has a reported total annual revenue, in its audited annual financial statements, of more than HK\$5,000 million;
 - (B) Subject to sub-subparagraph (i)(c)(C) below, in any case where the corporate concerned is a member of a group of companies, the group of companies has a consolidated reported total annual revenue, in the group's latest audited consolidated annual financial statements, of more than HK\$5,000 million;
 - (C) in any case where the corporate concerned is consolidated with other corporates by the AI for risk management purposes, the aggregate of the reported total annual revenue in the latest audited annual financial statements of the corporate concerned and the other corporates, is more than HK\$5,000 million.
- (ii) In making the assessment for the revenue threshold specified under paragraph 76(i)(c) above, the figure must be the higher of that computed based on the

average amount calculated over the prior three years, or on the latest amount updated every three years by the AI⁴³.

- 77 The Basel III final reform package further requires that the **equity exposures** of IRB banks must be subject to the revised SACR (as defined in paragraph 18 above). It is proposed that this Basel standard be applicable to an AI that currently uses the market-based approach and/or the PD/LGD approach for their “in-scope” equity exposures, which is defined as the equity exposures of the AI except:-
- (i) equity exposures that are subject to capital deductions under Part 3 of the BCR; and
 - (ii) equity investments in funds that are subject to the “*Capital requirements for banks’ equity investments in funds*”⁴⁴ published by the BCBS in 2013.
- 78 For simplicity and in light of immaterial capital impact as observed from the local QIS, the HKMA intends to leave the choice to AIs on whether to make use of the **transitional arrangements in respect of equity exposures** set out in the Basel III final reform package or not⁴⁵. AIs are invited to indicate their preference for one of the two options below:
- (i) Option 1: Phase-in allowed under both the revised STC (as defined in paragraph 18 above) and revised IRB approach⁴⁶; or
 - (ii) Option 2: No phase-in allowed under both the revised STC (see above) and revised IRB approach.
- 79 In view of the fact that the migration of the LDPs and equity exposures specified above is mandated by the Basel III final reform package, the HKMA intends to reduce the associated compliance burdens on AIs as far as practicable. The HKMA will seek to work with the Department of Justice to amend the BCR in a way that would facilitate an automatic transfer of the specified portfolios out of the advanced IRB approach or the IRB approach, as the case requires, upon the implementation of the Basel III final reform package.

⁴³ The Basel III final reform package is unclear as to which consolidated annual revenue figure should be adopted by banks in case the “average” amount and the “latest” amount of the corporate concerned differ (see 2022 version of CRE30.35). For better clarity and consistency, it is specified that the higher of the two figures should be adopted for this purpose.

⁴⁴ See <https://www.bis.org/publ/bcbs266.pdf>. This standard is being implemented in Hong Kong.

⁴⁵ See CRE90.1 to CRE90.3 of the 2022 version of the consolidated Basel Framework.

⁴⁶ Under this option, an AI that uses the IRB approach in respect of its equity exposures immediately before the implementation of the Basel III final reform package will have the discretion to choose whether to apply the IRB phase-in arrangement in tandem or move directly to the fully phased-in revised STC with effect from the implementation date.

3.2 *Treatment of maturity under the foundation IRB approach*

80 The BCR currently require that an AI that uses the foundation IRB approach for its **corporate, sovereign and bank exposures** must seek the prior consent of the MA if the AI would like to use instead the advanced IRB approach to calculate the maturity of such exposures. To provide greater flexibility, the HKMA proposes to amend §167(c) of the BCR such that an AI that uses the maturity treatment under the foundation IRB approach will only be required to inform the MA by notice in writing within 7 calendar days after it has switched to the maturity treatment under the advanced IRB approach as set out in §168 of the BCR. To strike a balance among flexibility, operational complexity and potential regulatory arbitrage, AIs are expected to:

- (i) switch the maturity treatment of all their corporate, sovereign and bank exposures under the foundation IRB approach to advanced IRB approach;
- (ii) establish rigorous internal processes and systems to capture the relevant data and calculate the maturity under advanced IRB approach; and
- (iii) subject the related processes and systems to adequate assessment by a competent independent party with proper documentation for review by a third party.

3.3 *Exemption from definition of commitments*

81 To ensure consistency between the revised SACR and revised IRB approach, the national discretion to exclude certain arrangements in respect of corporates and SME from the definition of **commitment** will not be exercised under the IRB approach (please also see paragraph 47 in Part III above).

3.4 *Residential mortgages*

82 In line with the corresponding proposal under paragraph 44(ii) in Part III, for the purposes of the IRB retail subclasses of “residential mortgages to individuals” and “residential mortgages to property-holding shell companies” (collectively referred to as RML for the purposes of this Part), the HKMA does not propose to recognise as RML those bank loans **guaranteed by monoline guarantors** to finance the purchase of residential properties by borrowers.

- 83 Recognising the significance of Als' property exposures to the Hong Kong banking sector and to better align with the HKMA's long-standing prudential standards for Als' property exposures, the HKMA also intends to maintain the **LGD floor applicable to RMLs** under the IRB approach at the current level of 10% (as opposed to the more relaxed 5% under the Basel III final reform package).

3.5 Sovereign exposures

- 84 The treatment of sovereign exposures under the revised IRB approach in the Basel III final reform package is –set out in paragraph 19 of the revised IRB approach section in one single sentence, “[t]he treatment of sovereign exposures is unchanged from the Basel II framework (June 2006)”.
- 85 The BCBS has subsequently fleshed out the detailed IRB treatment of sovereign exposures and incorporated them into the **2022 version of the IRB chapters of the consolidated Basel Framework** published in December 2019⁴⁷. This has been done in a way that retains the main features of Basel II (such as the option to apply the advanced IRB approach and absence of existing and new input floors) but applies the other IRB changes introduced under the Basel III final reform package (e.g. the removal of the 1.06 IRB scaling factor, enhancements in estimation practices and data requirements) on the assumption that such changes are not substantive for this asset class.
- 86 Pending the BCBS's final decision on the treatment of sovereign exposures under its capital framework⁴⁸, the HKMA considers the above BCBS approach to the interim treatment of sovereign exposures under the revised IRB approach pragmatic and relevant to Hong Kong. It is thus proposed to adopt the treatment of sovereign exposures as set out in the 2022 version of the IRB chapters of the consolidated Basel Framework upon implementation of the revised IRB approach in Hong Kong.

3.6 Adoption of IRB approach for asset classes

- 87 The Basel III final reform package, which places significantly greater emphasis on the modellability of asset types, has replaced the “wholesale” approach to adopting the IRB approach under Basel II (i.e. across all material asset classes and business units of

⁴⁷ See https://www.bis.org/basel_framework/.

⁴⁸ Please see footnote 9.

a bank and across its banking group simultaneously) with an **“asset class-based” approach to adopting the IRB approach.**

- 88 For implementation, the HKMA proposes to map the major IRB classes and subclasses specified in the BCR into seven **“IRB adoption classes”** on which the adoption of the IRB approach by an AI will be based, along the lines of the relevant standards set out in the 2022 version of the consolidated Basel Framework (see CRE30.45)⁴⁹, as tabled below. The existing BCR requirements relating to minimum IRB coverage ratio will be removed accordingly.

Table IRB-1: IRB adoption classes

IRB adoption class	IRB class covered	IRB subclass covered
1. Corporate-Non-SL	Corporate exposures	(a) Small-and-medium sized corporates* (b) Other corporates* * Excluding specialized lending (“SL”)
2. Corporate-SL	Corporate exposures	(a) All SL falling within corporate subclasses
3. Sovereign	Sovereign exposures	(a) Sovereigns (b) Sovereign foreign public sector entities (c) Multilateral development banks
4. Bank	Bank exposures	(a) Banks (b) Securities firms (c) Public sector entities (excluding sovereign foreign public sector entities)
5. Retail-QRRE	Retail exposures	(a) Qualifying revolving retail exposures
6. Retail-RML	Retail exposures	(a) Residential mortgages to individuals (b) Residential mortgages to property-holding shell companies

⁴⁹ Two asset classes in the Basel Framework, namely corporate purchased receivables and retail purchased receivables, are not included in the above table to reflect that these portfolios are classified as either corporate exposures or retail exposures under the BCR.

7. Retail– Others	Retail exposures	(a) Small business retail exposures (b) Other retail exposures to individuals
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89 In relation to the two IRB classes not captured in Table IRB-1:

- Equity exposures (equity investment in funds only) - The availability of the IRB approach will depend on whether the AI has the MA's approval to use the IRB approach to calculate the RWA of the underlying exposures of the funds; and
- Other exposures – An AI will be required to adopt the IRB approach for the IRB class of other exposures upon its first use of the IRB approach for one or more of the IRB adoption classes set out in Table IRB-1, in light of the simple mechanical treatment of this exposure type under the IRB approach (which is substantially the same under the existing STC / revised STC (see paragraph 18 for definitions)).

4 Preliminary Implementation Arrangements

90 The implementation of the revised IRB approach in Hong Kong will necessitate reviews and refinements of IRB models, rating systems and related policies and procedures by AIs for the purposes of complying with the new or revised IRB standards. Some of these tasks will require the approval or consent of the MA in advance (e.g. significant change to be made to a rating system already approved by the MA for IRB calculations). As such, the HKMA will deploy more resources to process AIs' additional applications ensuing the implementation of the revised IRB standards and expect AIs to engage with the HKMA for a review of their IRB applications at the early stage. The following **preliminary implementation arrangements and tentative timetables** are thus proposed to facilitate the implementation planning and preparation work of both AIs and the HKMA:

- AIs are encouraged to conduct a self-assessment on its compliance with the new or revised minimum requirements for use of the IRB approach, on the basis of the Basel III final reform package and the implementation proposals discussed in this document;
- AIs to inform the HKMA, preferably by 31 March 2021 on (i) the number and types of existing IRB models that may require significant changes; (ii) new IRB models to be developed; (iii) other implementation-related applications envisaged by the AIs; and (iv) the expect timeline for submitting the above applications for the MA's prior approval / consent where required under the BCR;

- (iii) Upon collection of such information, the HKMA model validation team would communicate with the AIs on plans for model review and related arrangements;
- (iv) The HKMA will review the prevailing AI-specific requirements applicable to an AI's use of the IRB approach, and communicate the review results and necessary modifications with the AI concerned in due course (please see paragraph 75(ii) above); and
- (v) The HKMA will update the Questionnaires on "Self-Assessment of Compliance with Minimum Requirements for Adoption of the IRB Approach" and Supervisory Policy Manual module CA-G-4 "Validating Risk Rating Systems under the IRB Approach" to cope with the implementation of the revised IRB framework.

VI REVISED OPERATIONAL RISK FRAMEWORK

1 Introduction

- 91 The Basel III final reform package replaced the existing approaches (viz., the basic indicator approach (“BIA”), the standardised (or alternative standardised) approach (“SAOR”), and the advanced measurement approaches) in the operational risk framework with a single revised standardised approach (“revised SAOR”) based on new and recalibrated components to better reflect the operational risk of banks. This part highlights the key components of the revised SAOR and the HKMA’s proposed approach to implementing them.
- 92 Under the revised SAOR, a bank is required to determine its operational risk capital requirements based on two components, namely Business Indicator Component (“BIC”) and Loss Component (“LC”). Similar to the existing BIA and SAOR (albeit calibrated with higher risk-sensitivity), the BIC corresponds to a measure of a bank’s business volume which assumes that operational risk increases at an accelerated rate with a bank’s size. On the other hand, akin to the existing advanced measurement approaches but without reliance on banks’ internal model, the LC is a measure of a bank’s internal loss experience which assumes that a bank’s historical operational risk losses are an indicator of its operational risk losses in the future.⁵⁰

2 Proposed modifications to operational risk framework

2.1 *Calculation of minimum operational risk capital*

- 93 Under the revised SAOR, the minimum operational risk capital (“ORC”) is determined as:

$$ORC = BIC \times ILM$$

where—

- BIC is calculated in the manner described in paragraph 94 below; and
- ILM (“Internal Loss Multiplier”) is calculated in the manner described in paragraph 96 below.

⁵⁰ Detailed explanation on the design behind the BIC and the LC could be found in the BCBS consultation document “Standardised Measurement Approach for operational risk” (<https://www.bis.org/bcbs/publ/d355.pdf>).

- 94 BIC is a financial-statement-based proxy for operational risk and is calculated from the BI as follows:

$$BIC = \sum(BI \times \alpha_i)$$

where—

- Business Indicator (“BI”) is a sum of three components: the interest, leases and dividend component (“ILDC”); the services component (“SC”), and the financial component (“FC”);⁵¹ and
- α_i is a set of marginal coefficients that are multiplied by the BI based on three buckets.

BI bucket	BI range (in € billion)	BI marginal coefficients (α_i)
1	≤ 1	12%
2	$1 < BI \leq 30$	15%
3	> 30	18%

- 95 Apart from the BIC, certain banks (please also see paragraphs 97 and 102 on what these banks would be) are also required to calculate a LC to account for unexpected operational losses. Instead of relying on banks’ internal models like the advanced measurement approaches, the revised SAOR uses a multiple of average annual losses⁵² as a proxy for unexpected loss. The formula for LC is as follows:

$$LC = 15 \times \text{average annual operational risk losses over the past ten years}$$

⁵¹ In the formula below, a bar above a term indicates that it is calculated as the average over three years:

$$\begin{aligned}
 ILDC &= \text{Min} \left[\overline{\text{Abs(Interest Income - Interest Expense)}}; 2.25\% \cdot \overline{\text{Interest Earning Assets}} \right] + \overline{\text{Dividend Income}} \\
 SC &= \text{Max} \left[\overline{\text{Other Operating Income}}; \overline{\text{Other Operating Expense}} \right] + \text{Max} \left[\overline{\text{Fee Income}}; \overline{\text{Fee Expense}} \right] \\
 FC &= \overline{\text{Abs(Net P\&L Trading Book)}} + \overline{\text{Abs(Net P\&L Banking Book)}}
 \end{aligned}$$

For AIs that are in operation for less than 3 years, special/transitional arrangements similar to that under §340 and §341 of the current BCR will be made available to them.

⁵² The minimum threshold for including a loss in the calculation of average annual losses is set at €20,000. At national discretion, supervisors may increase the threshold to €100,000 for banks in buckets 2 and 3 (i.e. where the BI is greater than €1 billion).

96 Finally, the ILM serves as a scaling factor that adjusts the BIC depending on the operational loss experience of a bank. It gives a value larger than 1 when LC is larger than BIC, and vice versa⁵³. The ILM is calculated as follows:

$$ILM = Ln\left(\exp(1) - 1 + \left(\frac{LC}{BIC}\right)^{0.8}\right)$$

97 There are a number of qualifying criteria to the use of LC. The calculation of average losses in the LC must be based on 10 years of high-quality annual loss data that meets the minimum loss data standards set out in OPE25.14 – 25.34 of the 2022 version of the consolidated Basel Framework.⁵⁴ An AI must have its operational loss data reviewed by a competent independent party to ensure that the minimum loss data standards are met before using the data to calculate the LC. Thereafter, the HKMA plans to incorporate the minimum data loss standards into the existing annual ORM Independent Compliance Assessment in which selected AIs are required to engage an independent party to assess the AIs' compliance with the relevant requirements. Where necessary, the HKMA will conduct thematic examinations or desktop reviews of selected AIs to assess their compliance. Banks which do not meet the minimum loss data standards are required to hold capital that is at a minimum equal to 100% of the BIC (see further discussions under paragraph 102(v)). For banks in bucket 1 (i.e. with BI ≤ €1 billion), ILM is equal to 1 unless national discretion is exercised to allow the inclusion of internal loss data into the framework.

2.2 Exclusions in the calculation of business indicator and historical losses

98 Banks may request supervisory approval to exclude certain operational loss events that are no longer relevant to the bank's risk profile, meaning the cause of the loss event should not occur in other areas of the AI's operations. The BCBS also suggests some quantitative thresholds for determining whether the exclusion of an operational loss event can be allowed, which the HKMA proposes to adopt for the purpose of local implementation, viz., (i) that the event concerned should have been included in the

⁵³ When LC and BIC are identical, ILM equals 1 and thus ORC equals BIC.

⁵⁴ For banks that do not have 10 years of high-quality loss data, they may use a minimum of five years of data to calculate the LC when they first move to the revised SAOR. Banks that do not have five years of high-quality loss data must calculate the capital requirement based solely on the BIC. Supervisors may however require a bank to calculate capital requirements using fewer than five years of losses if the ILM is greater than 1 and supervisors believe the losses are representative of the bank's operational risk exposure. Please see paragraph 102(iv) for the HKMA's current proposal in respect of this area of national discretion.

AI's operational loss database for at least 3 years and (ii) that the amount of loss exceeds 5% of the AI's average annual operational loss.

- 99 Banks may also request supervisory approval to exclude divested activities from the calculation of the BI. Loss and BI data of acquired businesses/merged entities should be included in the capital calculation under the revised SAOR.

3 Proposed approach for local implementation

- 100 Since the revised SAOR will be the only approach available in the revised operational risk framework, all locally-incorporated AIs are required to adopt the approach to calculate minimum ORC requirements.

- 101 For local implementation, the HKMA proposes to translate the BI ranges using a conversion rate of €1 to HK\$10 for the calculation of the BIC:

BI bucket	BI range (in HK\$ billion)	BI marginal coefficients (α_i)
1	≤ 10	12%
2	$10 < BI \leq 300$	15%
3	> 300	18%

- 102 National discretion is available in five areas. The HKMA's current policy intention in respect of each of them is as follows:

- (i) ***Allowing bucket 1 banks to calculate ILM based on internal loss data instead of requiring them to set ILM at 1*** - The HKMA proposes not to exercise this discretion, at least initially. The preference would be to observe for a period how well AIs in bucket 1 on the whole are able to meet the minimum operational criteria set out in OPE25.14 - 25.34 of the 2022 version of the consolidated Basel Framework (i.e. the prerequisites for inclusion of internal loss data in calculating ORC requirement), for instance, through requiring them to report loss data for supervisory monitoring. When the high quality of loss data is ensured, the HKMA may consider exercising this discretion to allow bucket 1 banks to use ILM for calculating ORC requirement, having regard to the fact that the use of ILM should incentivise AIs to improve their operational risk management.

- (ii) ***Setting the value of ILM to 1 for all banks in the jurisdiction*** - The HKMA proposes not to exercise the discretion (which will otherwise require AIs in buckets 2 and 3 to set the value of ILM equal to 1 in ORC calculation). AIs in buckets 2 and 3, which are larger in scale with more resources available to meet requirements on operational risk management, should be able to meet minimum loss data standards set out in OPE25.14 - 25.34 of the 2022 version of the consolidated Basel Framework. Again, the use of ILM should incentivise AIs to improve their operational risk management.
- (iii) ***Increasing the minimum threshold for including a loss event in the calculation of average annual losses for loss component from €20,000 to €100,000*** (proposed to be translated as HK\$200,000 and HK\$1,000,000 respectively for local application⁵⁵) - To preserve the risk sensitivity in the revised SAOR, the HKMA proposes not to exercise this discretion. The local QIS conducted on a sample of AIs indicated no material impact on ORC should the threshold be set at HK\$200,000 or HK\$1,000,000. Also, regardless of whether this discretion is exercised, AIs in buckets 2 and 3 are required to disclose their annual loss data for each of the ten years in the ILM calculation window using both HK\$200,000 and HK\$1,000,000 thresholds.
- (iv) ***Requiring a bank with fewer than five years of high-quality loss data to calculate capital requirements based on the loss data (instead of solely on the BI Component) if the ILM calculated based on the loss data is greater than 1 and the losses are representative of the bank's operational risk exposures*** - To keep the framework simple, the HKMA proposes not to exercise this discretion.
- (v) ***Imposing an ILM larger than 1 on a bucket 2 or bucket 3 bank that fails to meet the minimum operational loss data quality standards*** – To motivate an AI to meet the minimum data quality standards as soon as possible, the HKMA proposes that a bucket 2 or bucket 3 AI not meeting the minimum data quality standards must apply an ILM of 1.25 to calculate its operational risk capital requirements. When an AI moves from bucket 1 to bucket 2 or 3, it will be given a grace period of 9 months within which even if it does not meet the minimum data quality standards, the applicable ILM is 1. Its applicable ILM will become 1.25 if it still fails to meet the minimum data quality standards 9 months after its BI exceeded HK\$10 billion⁵⁶. The HKMA also proposes to require a bucket 1 AI to report operational loss data regularly in a banking

⁵⁵ The conversion rate of €1=HK\$10 is used in translating the thresholds.

⁵⁶ Please refer to paragraph 101 for the conversion rate used in translating the BI range

return similar to other AIs. This should enable it to meet the minimum loss data requirement more easily when it is required to start calculating the ILM.

103 In addition to the above national discretions, the HKMA is conscious of the possibility that an AI may meet the minimum operational loss data quality standards only at the solo/combined level but not at the consolidated level. In this case, for the sake of prudence, we propose that the AI treats its ILM at the consolidated level as:

- 1.25 if its solo/combined ILM is less than or equal to 1; or
- 1.25 or its solo/combined ILM, whichever is higher, if the solo/combined ILM is larger than 1.

VII OUTPUT FLOOR

- 104 The Basel III final reform package introduces an **output floor** as a replacement to the Basel I-based capital floor under the Basel II framework. The new output floor ensures that banks' aggregate capital requirements generated using internal models (where banks have supervisory approval to do so) plus any RWA generated using standardised approaches (for other risk types) are no lower than 72.5% of the aggregate RWA calculated by using only the standardised approaches for credit risk, market risk and operational risk under the Basel III final reform package. This is accompanied by a five-year phase-in arrangement starting from 50% on 1 January 2023 and to be raised at 5 percentage points each year until reaching 72.5% in 2028.⁵⁷ The transitional arrangements also include a discretion for national supervisors to apply a cap that limits the RWA increase resulting from the application of the floor to 1.25 times of an AI's RWA calculated before the application of the floor⁵⁸.
- 105 To strike a balance between ensuring the resilience of the Hong Kong banking sector and the expected capital impacts on AIs⁵⁹ and for level playing field considerations, the HKMA proposes to implement the output floor under an **accelerated phase-in arrangement and without the RWA cap**. That is, locally incorporated AIs that adopt one or more internal models-based approach to calculate their RWA for credit risk and/or RWA for market risk for regulatory capital purposes will be subject to an output floor as follows:
- 65% during 2023 and 2024;
 - 70% during 2025 to 2027; and
 - 72.5% from 2028 onward.

⁵⁷ Please see table under paragraph 6.

⁵⁸ To illustrate the calculation of output floor and application of the RWA cap: Say a modelling bank's pre-floor aggregate RWA for credit, market and operational risks calculated using modelling approach(es) (where it has the supervisory approval to do so) and SAs (for the other risk types) is \$76, and the hypothetical aggregate RWA of the bank calculated using only the SAs for credit, market and operational risks is \$140. At an output floor level of 70% and without the RWA cap, the post-floor aggregate RWA of the bank is \$98 (i.e. \$140 x 70%); if the RWA cap is applicable, the post-floor aggregate RWA of the bank is capped at \$95 (i.e. \$76 x 1.25).

⁵⁹ Based on the HKMA's local QIS results, IRB AIs would generally have capital savings at the initial stage of output floor implementation, allowing considerable time for the AIs to further build up their capital resources if necessary prior to the full implementation of the output floor at 72.5% in 2028.

VIII REVISIONS TO THE LEVERAGE RATIO STANDARD

1 Introduction

106 The Basel III final reform package included a final LR framework incorporating a number of technical revisions over BCBS standard on *“Basel III leverage ratio framework and disclosure requirements”*⁶⁰ published in 2014. Some of the revisions (i.e. those that are relatively more straightforward or are mainly clarifications in nature) were already reflected in the LR framework when it was implemented in Hong Kong as a statutory minimum requirement (i.e. 3%) on 1 January 2018. Those that are still to be implemented (which the HKMA proposes to implement together with other revised risk-based requirements in the Basel III final package described elsewhere in this CP) relate to:

- (i) measurement of derivative exposures;
- (ii) revisions to the specific treatment for written credit derivatives
- (iii) treatment of regular-way purchases and sales of financial assets;
- (iv) CCFs for off-balance sheet items;
- (v) exemption of central bank reserves; and
- (vi) LR buffer for G-SIBs.

107 The following sets out the HKMA’s proposals for incorporating the above revisions to the LR framework.

2 Proposed revisions

2.1 *Measurement of derivative exposures*

108 Pending implementation of the standardized approach for measuring counterparty credit risk exposures (“SA-CCR”) for risk-based capital requirements in Hong Kong, the LR framework in Hong Kong presently uses the Current Exposure Method (“CEM”) as the methodology for determining the exposure measure of derivative transactions,

⁶⁰ Please refer to <https://www.bis.org/publ/bcbs270.pdf>.

with certain LR-specific modifications to limit the recognition of collateral. Under the Basel III final reform package, the methodology is required to be based on a modified version of the SA-CCR (referred to in the following as “modified SA-CCR”), with a more restrictive recognition of credit risk mitigation.

- 109 Having regard to industry’s comments during previous consultations, the HKMA proposes to synchronise the implementation of SA-CCR and modified SA-CCR respectively for the risk-based capital framework and the LR framework in Hong Kong (presuming SA-CCR is brought into effect in Hong Kong before the implementation date of the Basel III final reform package). This would allow AIs to avoid the operational cost of having to maintain two systems for measuring derivative exposures (i.e. SA-CCR for risk-based framework, CEM for LR). Similar to the implementation of SA-CCR under the risk-based capital framework, the modified CEM under the framework (with corresponding adjustments for LR calculation) will be made available for AIs that are users of the BSC approach for calculating credit risk capital requirement.
- 110 Separately, the BCBS released a document on “*Leverage ratio treatment of client cleared derivatives*”⁶¹ in June 2019 to set out the revised treatment of collateral in client cleared derivatives for LR calculation. The revised treatment aligns with the treatment under the SA-CCR in that it permits both cash and non-cash forms of segregated initial margin and cash and non-cash variation margin received from a client to offset the replacement cost and potential future exposure. It seeks to balance the robustness of the LR as a non-risk based safeguard against unsustainable sources of leverage with the policy objective set by the G20 Leaders to promote central clearing of standardised derivative contracts. The HKMA will likewise incorporate this in the modified SA-CCR and the adjusted modified CEM for LR calculation.

2.2 Revisions to the specific treatment for written credit derivatives

- 111 For the purpose of capturing the credit exposure to the underlying reference entity of a credit derivative written by a bank, the effective notional amount referenced by the derivative (which is required to be included in the exposure measure) may be reduced by: (i) any negative fair value of those instruments that has reduced Tier 1 capital and (ii) the effective notional amount of credit protection purchased through a credit derivative on the same reference name (subject to certain conditions on the ranking of the reference obligation and the remaining maturity of the credit protection

⁶¹ Please refer to <https://www.bis.org/bcbs/publ/d467.pdf>.

purchased). The Basel III final reform package expanded such conditions with additional eligibility criteria to address wrong-way risk arising from a credit derivative purchased from a counterparty that is connected with the reference obligation, or from a counterparty whose credit quality is highly correlated with the value of the reference obligation⁶². The HKMA proposes to fully follow the expanded eligibility criteria as set out in the Basel III final reform package, and incorporate the criteria into the LR framework upon SA-CCR implementation (for the sake of consistency with SA-CCR).

2.3 *Treatment of regular-way purchases and sales of financial assets*⁶³

- 112 To harmonise the method for recognizing unsettled regular-way purchases or sales of financial assets (i.e. between those subject to trade date accounting and those subject to settlement date accounting), the Basel III final reform package set out revised treatment which requires banks using trade date accounting to reverse out any offsetting between cash receivables and cash payables for unsettled transactions, except those cash receivables and payables arising from financial assets bought and sold that are fair valued and included in the bank's regulatory trading book (as specified in the revised market risk framework published by the BCBS in January 2019)⁶⁴. In addition, a 100% CCF is specified for the exposure amount associated with unsettled financial asset purchases which is accounted for at settlement date. The HKMA proposes to introduce the new treatments on regular-way purchases and sales of financial assets as set out in the Basel III final reform package.

2.4 *CCFs for off-balance sheet items*

- 113 The revisions seek to align the CCFs for off-balance sheet items with those finalised for the SACR under the risk-based capital framework of the Basel III final reform package. The HKMA proposes to follow the new CCFs introduced in the revised SACR for the purpose of calculating the off-balance sheet items in the LR exposure measure.

⁶² Please see LEV30.31 to LEV30.35 of the 2022 version of the consolidated Basel Framework.

⁶³ These refer to purchases or sales of financial assets under contracts for which the terms require delivery of the assets within the time frame established generally by regulation or convention in the marketplace concerned.

⁶⁴ Please refer to <https://www.bis.org/bcbs/publ/d457.pdf>.

2.5 *Exemption of central bank reserves*

114 Acknowledging that the requirement to include central bank reserves in the LR calculation may have the potential to impair the effective transmission of monetary policy during periods of macroeconomic stress, the Basel III final reform package included flexibility for jurisdictions to exempt central bank reserves from the LR exposure measure on a temporary basis subject to:

- (i) an increase in the calibration of the minimum LR requirement commensurately to offset the impact of exempting central bank reserves (in order to maintain the same level of resilience provided by the LR); and
- (ii) Pillar 3 disclosure of the impact of the temporary exclusion, in addition to ongoing disclosure of the Basel III LR without application of the exemption to ensure comparability of disclosure among banks across jurisdictions.

115 In order to keep the LR framework simple, the HKMA does not intend to incorporate the above flexibility at this stage, particularly considering the fact that the issue should not have a material impact in Hong Kong, the potential speculation on “exceptional macro-economic circumstances”, as well as the operational complexities otherwise required to accommodate the temporary calibration mechanism mentioned in paragraph 114(i) above.

2.6 *LR buffer for G-SIBs*

116 The Basel III final reform package introduced a LR buffer requirement for G-SIBs. Consistent with the risk-weighted G-SIB buffer (i.e. higher loss-absorbency (“HLA”) requirement), the LR buffer seeks to mitigate the externalities created by G-SIBs. Similar to HLA requirement, the extent to which a G-SIB meets its LR buffer requirement will determine whether its capital distributions will be subject to constraints.

117 The HKMA does not propose to implement the LR buffer requirement on any locally incorporated AIs at this stage, including those that are domestic systemically important banks (on which the HLA requirement is already imposed to address their systemic risks) or other local subsidiary operations of overseas incorporated G-SIBs. This is in recognition of the fact that these AIs are already required to be subject to the LR buffer requirement at the parent bank group level.

IX IMPLEMENTATION TIMELINE

- 118 The HKMA proposes to bring into force the new requirements described in this CP on 1 January 2023, in line with the internationally agreed timetable as summarised in the following table.

Time	Milestone
2020	Publish CP to the industry (2 months consultation period)
H1 / 2021	Informal consultation of detailed proposals to amend the BCR
H2 / 2022	Statutory consultation of Banking (Capital) (Amendment) Rules
Q4 / 2022	Table Banking (Capital) (Amendment) Rules to the Legislative Council for negative vetting
2023	Target implementation date

- 119 When finalised, the revised requirements proposed in this CP (and any consequential amendments to existing BCR requirements) will be implemented through legislative amendments to the BCR, together with corresponding updates to the relevant supervisory guidance and the Return of capital adequacy ratio (MA(BS)3) (i.e. the CAR return).
- 120 Meanwhile, to the extent that the text in the Basel III final reform package (together with the proposals contained in this CP) already provides sufficient information on the key fabrics of the requirements contained in the package, AIs are encouraged to start gearing up their IT systems to prepare for the implementation of the requirements.