V. Counterparty Credit Risk

1. ***General***

Scope of application

Q1.	**Does Part 6A of the BCR apply to FX spot contracts?**
A1.	FX spot contracts are outside the scope of Part 6A unless they fall within the definition of "long settlement transaction" in §2(1) of the BCR. AIs are reminded that in the case of a FX spot contract that is not a long settlement transaction and not yet due for settlement, the receivable arising from the contract falls within §65L(1)(b) or §114A(1)(b), or paragraph (g) of the definition of "cash items" in §139(1), of the BCR. If the settlement fails on the settlement date, the receivable will fall within §65L(3) or (4) or §114A(3) or (4), or paragraph (h), (i) or (j) of the definition of "cash items" in §139(1), as the case requires.
Q2.	**Does Part 6A of the BCR apply to derivative contracts embedded in credit-linked notes and currency linked deposits?**
A2.	Credit default swaps embedded in credit-linked notes ("CLN") are outside the scope of Part 6A, having considered that— (a) in cases where an AI invests in CLN (i.e. it is a protection seller), its credit exposure to the credit protection buyer (i.e. the issuer of the CLN) is an on-balance sheet exposure with known amount; (b) in cases where an AI issues CLN (i.e. it is a protection buyer), the AI does not incur any default risk exposure to the protection sellers (i.e. the holders of the CLN) because they have already paid the principal upfront to the AI (which is equal to the maximum possible credit-event payment under the credit default swap embedded in the CLN). In the case of currency linked deposits, the HKMA would consider it acceptable for an AI to regard the put option embedded in the currency linked deposit bought by the AI as not having any default risk exposure if the seller of the put option (i.e. the depositor) has already delivered upfront to the AI the full settlement amount (being the amount that the seller is obliged to pay to the AI under the put option when the option is exercised). In such case, the bought put option may be regarded as being outside the scope of Part 6A.
Q3.	**Certain bond transactions, such as primary issuance, would generally have settlement date longer than 5 business days after the trade date. Please clarify whether this kind of transactions is in scope of Part 6A of the BCR.**

A3.	Bond transactions, including primary issuance, that have settlement date longer than 5 business days after the trade date fall within the definition of "long settlement transaction" in §2(1) of the BCR. They are within the scope of Divisions 1A, 2 and 2A of Part 6A of the BCR.

Margin period of risk used in the SA-CCR approach and the IMM(CCR) approach

Q4.	**If there is an illiquid transaction or collateral in a netting set, when should the higher supervisory floor under §226BZE(4) or §226M(3) be applied to the netting set?**
A4.	The supervisory floor of 20 business days applies immediately once a netting set falls within §226BZE(4) or §226M(3).
Q5.	**Under §226BZE and §226M, for future dates beyond the expected maturity of a transaction that leads to an increase in margin period of risk (e.g. an illiquid transaction falling within §226M(3)), should the margin period of risk used in respect of those future dates be reduced to the corresponding minimum set out in §226BZE(2) or §226M(1)?**
A5.	The supervisory floors set out in §226BZE and §226M are minimum requirements. AIs should not mechanically apply the minimum requirements but should assess the market liquidity of the positions in question. The actual margin periods of risk that should be used in calculating the amounts of default risk exposures may be longer than the supervisory minima if the liquidity of the positions concerned warrants it.
Q6.	**In the case of non-centrally cleared derivative contracts that are subject to the margin standards set out in SPM module CR-G-14 "Non-centrally Cleared OTC Derivatives Transactions – Margin and Other Risk Mitigation Standards", what margin calls are to be taken into account for the purpose of counting the number of disputes in accordance with §226BZE(6) or §226M(7)?**
A6.	In such case, it is acceptable for AIs to count variation margin call disputes only.

Risk-weights applicable to default risk exposures to banks or qualifying non-bank financial institutions ("QNBFIs") under STC approach

Q7.	**Assuming that—** **(a) a set of nettable SFTs and derivative contracts are entered into with a bank or QNBFI;**

	(b) some of the SFTs and derivative contracts have an original maturity of more than 3 months while the original maturity of the others is less than 3 months; and **(c) the SFTs and derivative contracts are all under the same netting set,** **clarification is sought on whether the set of nettable SFTs and derivative contracts are required to be assigned risk-weights separately in accordance with the original maturity under §59(2) of the BCR.**
A7.	As cross-product netting is not recognised except for cases where the IMM(CCR) approach is used for both SFTs and derivative contracts, the amount of the default risk exposure of the SFTs and the amount of the default risk exposure of the derivative contracts must be calculated separately even though they are within the same netting set. When some of the SFTs and/or derivative contracts within the same netting set have an original maturity of more than 3 months, all SFTs and derivative contracts in the same netting set should be treated as general bank exposures under §59 of the BCR. In other words, both the default risk exposure of the SFTs and the default risk exposure of the derivative contracts are general bank exposures to the bank or QNBFI.

Collateral posted outside netting set

Q8.	**Could the HKMA provide examples to illustrate how §78(1A) to (1C) work?**
A8.	(a) The amount of the default risk exposure in respect of an SFT of an AI referred to in §78(1A)(a) is equal to the principal amount of the securities or money provided by the AI under the SFT to the counterparty concerned. Unlike the calculations under §226MK and §226ML, the securities or money received by the AI from the counterparty is not included as part of the default risk exposure. The credit risk mitigation effect of the securities or money received must be taken into account under Part 4 in accordance with— (i) if the simple approach is used—§85; or (ii) if the comprehensive approach is used—§88. (b) §78(1A)(b) is primarily intended to cater for derivative contracts entered into by an AI with a commercial end-user under a general banking facility where— (i) the commercial end-user is usually not a covered entity as defined in SPM module CR-G-14 "Non-centrally Cleared OTC Derivatives Transactions – Margin and Other Risk Mitigation Standards"; (ii) the general banking facility consists of multiple credit lines for various purposes (e.g. overdraft, letter of credit / trust receipt for importing goods

from overseas exporters, FX derivative contracts for hedging the FX risk associated with payments in foreign currencies, etc.) and at least one of the credit lines is for derivative transactions (Remarks: A general banking facility under which all credit lines are for entering into derivative contracts will not be considered as meeting the condition specified in §78(1B)(a). In such case, collateral can be taken into account only in the manner as specified in Division 1A or 2 of Part 6A);

(iii) the credit lines are secured by the same recognized collateral. This includes cases where the credit lines are secured by a single pool of different assets pledged (e.g. cash deposits and listed shares); and

(iv) in case, after default of the commercial end-user, the proceeds from liquidation of the assets pledged are insufficient to offset all the losses incurred by the AI under the facility, the AI would have discretion not to use any of the proceeds to offset losses on derivative contracts.

A numerical example is provided below to illustrate how the total risk-weighted amount of a general banking facility should be calculated under Part 4:

- A general banking facility of HK$ 2 million is granted to an unrated local corporate (applicable risk-weight ("RW") is 100%).
- The facility is secured by cash deposits of HK$0.5 million and double-A rated US$ debt securities (residual maturity is 8 years) issued by a US corporate with a current market value of HK$0.8 million.
- The facility consists of two credit lines with the following sub-limits and outstanding balances:

Type of credit line	*Sub-limit (HK$ million)*	*Drawn amount (HK$ million)*	*Undrawn amount (HK$ million)*	*Exposure amount (HK$ million)*
Overdraft	1.5	1	0	1
FX derivatives	2*	1	0	0.08**

* Expressed in notional amount.
** Representing default risk exposure amount calculated under the SA-CCR approach without taking into account any collateral received by the AI.

- By using the comprehensive approach, the risk-weighted amount ("RWA") of the facility

$$= max\left(0; \left[E - C_{cash} - C_{debts} \cdot \left(1 - H_{debts} - H_{fx}\right)\right]\right) \cdot RW$$

$$= max(0; [1.08 - 0.5 - 0.8 \cdot (1 - 0.06 - 0.08)]) \cdot 100\%$$

$$= 0$$

(c) §78(1C) is relevant to an AI if—

(i) a general banking facility granted by the AI consists of multiple credit lines and at least one of the credit lines is for derivative transactions;

(ii) the credit lines under the facility are secured by the same recognized collateral; and

(iii) all or part of the recognized collateral has been designated solely for offsetting losses on derivative contracts (in other words, the designated amount cannot be used to offset losses on non-default risk exposures such as overdraft or term loan).

The same example in paragraph (b) is used for illustration except that out of the cash collateral of HK$0.5 million, HK$0.2 million can only be used to offset losses on default risk exposures. Also, it is assumed that there is only one unmargined FX forward contract outstanding with a remaining maturity of 6 months. The amount of the default risk exposure of the FX forward contract is calculated by using the SA-CCR approach as follows:

(HK$'000)	*V*	*C*	*RC*	*MF*	*AddOn*	*PFE*	*Default risk exposure amount*
FX forward	30	200.0	0.0	0.707	28.28	2.55	3.57

By using the comprehensive approach—

- the RWA of the overdraft (in HK$'000)

$$= max\left(0; \left[E - C_{cash} - C_{debts} \cdot \left(1 - H_{debts} - H_{fx}\right)\right]\right) \cdot RW$$
$$= max(0; [1000 - 300 - 800 \cdot (1 - 0.06 - 0.08)]) \cdot 100\%$$
$$= 12$$

- the RWA of the FX forward contract (in HK$'000)

  = 3.57 * 100% = 3.57

- total RWA of the facility (in HK$'000) = 15.57

(d) In general, for the purposes of §78(1B) and §226BJ(7), collateral is considered to be designated solely for offsetting losses on default risk exposures if the designation is given effect to through contractual arrangements.

(e) Although the manner in which collateral is taken into account in RWA calculations under the BSC approach and IRB approach is different from that under the STC approach, the policy intent explained above also applies to §126(1A), (1B) and (1C) and §204(2), (3) and (4).

Cash collateral posted

Q9.	**We would like the HKMA to confirm our understanding that the credit risk or market risk of the posted collateral itself is not to be considered when determining capital requirements under Part 4, 5, 6, 7 or 8 if the posted collateral is "cash" (in any currency).**
A9.	If the cash, before it is posted as collateral, is not subject to any capital charge for credit risk or market risk under the BCR, this treatment will remain unchanged after it has been posted as collateral.

2. ***SA-CCR approach***

Classification of derivative contracts

Q10.	**Will there be further guidance on the determination of primary risk drivers of specific products that are common in the market. For example, where a cross currency interest rate swap without any principal exchange is mainly driven by interest rate risk, should it be classified as interest rate contract instead of exchange rate contract?**
A10.	For contracts that are commonly traded in the market, there is usually only one primary risk driver (i.e. the market risk factor that most significantly affects the mark-to-market value of a contract). In general, if a derivative contract is mainly driven by interest rate risk, unless the contract has another equally important risk driver, it would be classified as an interest rate contract for the purposes of the SA-CCR approach. AIs are expected to have the capability to identify the primary risk factors of their derivative contracts, including the ability to assess how sensitivities and volatilities of an underlying exposure drive the market value or payoff of the derivative contract concerned. Otherwise, it may call into question whether an AI's risk management framework is commensurate with the size and complexity of its derivative activities.
Q11.	**Should CNH (offshore) and CNY (onshore) be considered as two different currencies for the purpose of determining hedging sets? Similarly, should shares of the same company listed in multiple markets (e.g. H shares and A shares) be considered as shares issued by the same company?**
A11.	For the purposes of the SA-CCR approach, if rate or price differentials persistently exist between the onshore exchange rate and offshore exchange rate of a currency, or between the equities of a company listed in multiple exchanges, the two exchange rates must be treated as if they were exchange rates of two different currencies and derivative contracts referencing the equities must be treated as if they were referencing equities issued by different companies. Hence, CNH and CNY must be regarded as two different currencies, and H shares and A shares of the same company must be regarded as equities issued by two different companies, due to the concerns

	over basis risk.
Q12.	**Could more explanation be given on what AIs are expected to do under §226BQ(2), (3) and (4)?**
A12.	Under the SA-CCR approach, there are four pre-specified hedging sets for commodities (i.e. Energy, Metals, Agricultural, and Other commodities). §226BQ(2) and (3) require an AI to further classify contracts falling within each hedging set into subsets defined by the AI based on commodity types. For example, for the hedging set "Metals", an AI may want to introduce subsets such as "precious metals" and "base metals" if this would be more reflective of the basis risk to which the AI is exposed. The subsets may need to be redefined from time to time in light of any changes in the risk profile of the AI's commodity-related derivative contracts. §226BQ(4) empowers the HKMA to require an AI to use more refined definitions of commodity types for the purposes of setting up subsets. For example, crude oil could be a commodity type, but more refined definitions of commodity type such as Brent and West Texas Intermediate may also be used. Such power will be exercised only when the HKMA identifies, during its usual supervisory process, that some products which are grouped by the AI into the same hedging set or subset pose significant basis risk to the AI.
Q13.	**Does one-way margin agreement (where only the AI posts variation margin) fall within the definition of "variation margin agreement" in §226BA?**
A13.	No. As a result, contracts subject to an one-way margin agreement must be treated as unmargined contracts for the purposes of the SA-CCR approach.
Q14.	**For long settlement transactions that are generated from buy and sell trades with the same underlying securities and the same settlement date, please clarify whether they are subject to default risk exposure calculation as interest rate exposures under the SA-CCR approach.**
A14.	In cases where buy and sell trades with the same underlying securities and the same settlement date fall within the definition of "long settlement transaction" in §2(1) of the BCR, the following principles apply for the purposes of calculating the amounts of the default risk exposures of these trades under the SA-CCR approach— (a) if the underlying securities are equities, the trades should be treated as if they were equity-related derivative contracts; (b) if the underlying securities are debt securities, the trades should be treated as if they were interest rate contracts or credit-related derivative contracts, depending on the AI's own assessment of the primary risk factor that drives changes in the market values of the debt securities.

Q15.	**Please clarify whether bond transactions that are long settlement transactions should be classified as interest rate exposures under the SA-CCR approach.**
A15.	Under the SA-CCR approach, bond transactions that are long settlement transactions could be treated as if they were interest rate contracts or credit-related derivative contracts, depending on the AI's own assessment of the primary risk factor that drives changes in the market values of the bonds.

Treatment of multiple netting sets subject to a single variation margin agreement

Q16.	**If there is more than one netting set covered by the same variation margin agreement, how should the multiplier for each of the netting sets be calculated?**
A16.	In order to calculate the multiplier applicable to each of the individual netting sets covered by a single variation margin agreement or collateral amount, the haircut value of net collateral held ("C") for the netting sets as calculated under §226BJ should be allocated to each of the netting sets as follows: (a) If the AI concerned is a net receiver of collateral (C>0), all of the individual amounts allocated to the individual netting sets must also be positive or zero. Netting sets with positive current mark-to-market ("MTM") values must first be allocated collateral up to the amount of those MTM values. Only after all positive MTM values have been compensated may surplus collateral be attributed freely among all netting sets. (b) If the AI concerned is a net provider of collateral (C<0), all of the individual amounts allocated to the individual netting sets must also be negative or zero. Netting sets with negative MTM values must first be allocated collateral up to the amount of those MTM values. If the collateral provided is larger than the sum of the negative MTM values (e.g. where C = −17 and sum of –ve MTM values = −15), then all multipliers must be set equal to 1 and no allocation is necessary. (c) The sum of the allocated parts must be equal to C. Apart from the above limitations, AIs may allocate collateral at their discretion. The multiplier is then calculated per netting set by using Formula 23AN with C in the formula set equal to the allocated amount of collateral.

Effective notional amount

Q17.	**Is it correct that §226BZC(5)(b) does not cover derivative contracts where the notional amount varies due to price changes (typically, FX, equity and commodity derivative contracts)?**

A17. §226BZC(5)(b) is intended to cover interest rate contracts and credit-related derivative contracts with variable notional amounts specified in the contracts (e.g. amortizing and accreting swaps). §226BZC(5)(b) does not apply to derivative contracts where—

(a) the notional amount is denominated in a foreign currency and is variable solely because of the changes in the exchange rate between the foreign currency and Hong Kong dollars; or

(b) the notional amount is expressed in units of an underlying exposure (e.g. equity or commodity) and is variable solely because of the changes in the unit price of the underlying exposure.

Q18. **§226BZC(5)(b) requires AIs to use time-weighted average notional amount over the remaining life of a variable notional swap as the notional amount of the swap. Confirmation is sought on the interpretation of time-weighted average notional as below:**

Remaining maturity (year)	Notional (a)	Duration (b)	Weighted notional (a) × (b)
1	**10,000**	**0.25**	**2,500**
0.75	**7,500**	**0.25**	**1,875**
0.5	**5,000**	**0.25**	**1,250**
0.25	**2,500**	**0.25**	**625**
Average notional			**6,250**

A18. The interpretation is consistent with the requirement set out in §226BZC(5)(b), presuming that the word "Duration" in column (b) of the table carries its ordinary dictionary meaning (as opposed to it meaning either the effective, modified or Macaulay duration, or any other similar duration measure for the swap).

Q19. **Is it correct that only non-linear products can be decomposed?**

A19. Yes, linear products whose prices depend linearly on one or more underlying variables, such as ordinary interest rate swaps, must not be decomposed.

Q20. **How should the effective notional amounts be calculated for options?**

A20. (a) For European, Asian, American and Bermudan put and call options, the effective notional amount of each of these options must be calculated in accordance with §226BZA(1), with the supervisory delta adjustment calculated by using the simplified Black-Scholes formula set out in §226BZB(2) and (3). In particular—

	(i) in the case of Asian options, the price of the underlying exposure ("P") must be set equal to the current value of the average used in the payoff (see §226BZB(4)); and (ii) in the case of American and Bermudan options, the latest allowed exercise date must be used as the exercise date ("T") (see §226BZB(3)(b)(v)). (b) In the case of Bermudan swaptions, the supervisory duration used in calculating the adjusted notional of the swaption must be computed in accordance with §226BZC(2) and the start date ("S") in Formula 23AZ must be equal to the earliest allowed exercise date of the swaption, while the end date ("E") in the formula must be equal to the end date of the underlying interest rate swap. (c) In the case of a complex option to which §226BZA(5) applies, the option can be decomposed into vanilla options in a manner consistent with the approaches below: (i) For a digital option, the payoff of the option (bought or sold) with strike price K must be approximated via a "collar" combination of bought and sold European options of the same type (call or put). The strike prices of the European options must be set equal to 0.95·K and 1.05·K. The size of the position in the collar components must be such that the payoff of the digital option is reproduced exactly outside the region between the two strike prices. An effective notional amount is then computed for each of the bought and sold European options separately in accordance with §226BZA(1) with the supervisory delta adjustment calculated in accordance with §226BZB(2) and (3) (T and P in the formula in §226BZB(3) must be the exercise date of the digital option and the current price of the underlying exposure of the digital option respectively). The absolute value of the effective notional amount of the digital option is capped by the ratio of the digital payoff to the relevant supervisory factor. (ii) For a derivative contract whose payoff can be represented as a combination of European option payoffs (e.g. collar, butterfly/calendar spread, straddle, and strangle), each European option component must be treated as a separate contract. (iii) For a derivative contract that is a multiple-payment option (e.g. interest rate caps and floors), the contract may be represented as a combination of single-payment options. In particular, interest rate caps/floors may be represented as a portfolio of individual caplets/floorlets, each of which is a European option on a floating interest rate over a specific coupon period. For each caplet/floorlet, S and T are the time periods starting from the current date to the start of the coupon period, while E is the time period starting from the current date to the end of the coupon period.
Q21.	**We understand that the HKMA prefers calculation of the effective notional amounts of target redemption forwards ("TRF") through approximation by a set of (m×n) options, where m is the number of remaining fixing and n is the**

	number of options decomposed in each fixing. However, such approach would require significant enhancement in AIs' system. Processing massive decomposition transactions would also impose daily computational burdens on AIs. We therefore suggest approximating a TRF by a set of m leveraged forward, where m is the number of remaining fixing. Each of the leveraged notional amounts (equals to the unleveraged notional amount multiplied by the leveraging factor) reflects the default exposure when the TRF is out-of-the-money, and the effective notional amount of the TRF is the aggregate effective notional amount for the whole set of leveraged forwards. Would the HKMA consider this alternative approach acceptable?
A21.	The HKMA believes that approximation by options is more in line with the guiding principles for decomposition established in Chapter CRE52 of the Consolidated Basel Framework. However, if AIs consider their suggested approach is preferable because it is easier to implement, the HKMA would not have objection provided that— (a) TRFs and other similar derivative contracts referencing the same currency pair are grouped together to form a separate hedging set (it is also acceptable if the AI treats each such contract as a separate hedging set); and (b) the method chosen by an AI for a particular product type is applied consistently across all existing and future outstanding contracts in that product type.

Supervisory delta adjustment

Q22.	**How should the supervisory delta adjustment for options be calculated when the term P/K is zero or negative (e.g. as may be the case in a negative interest rate environment)?**
A22.	The supervisory delta adjustment should be calculated in accordance with §226BZB(2) and (3) by assigning a non-zero value to the parameter λ to incorporate a shift in the price of the underlying exposure and the strike price. The same value of λ must be used consistently for all interest rate options in the same currency. If the relevant supervisory authority in a jurisdiction has recommended an appropriate value of λ for the jurisdiction's local currency, AIs are encouraged to adopt the recommended value in calculating the supervisory delta adjustments for interest rate options in that currency. Nevertheless, AIs may use lower values if it suits their portfolios.
Q23.	**The calculation of supervisory delta adjustments for foreign exchange options depends on the convention taken with respect to the ordering of the respective currency pair. For example, a call option on EUR/USD is economically identical to a put option in USD/EUR. Nevertheless, the calculation of the**

	supervisory delta adjustment leads to different results in the two cases. Which convention should AIs select for each currency pair?
A23.	For each currency pair, the same ordering convention must be used consistently across the AI's portfolios and over time. The convention is to be chosen in such a way that it corresponds best to the market practice for how derivative contracts in the respective currency pair are usually quoted and traded.

Maturity

Q24.	**If a cross currency swap requires settlement of exchange differences on notional on a reset date, but despite substantial portion of the fair value of the transaction being settled on the reset date, the fair value would strictly not be zero because of discounting and the basis swap, can the reset date be used as the remaining maturity for exposure calculation?**
A24.	§226BZD(3), which reflects the requirement in paragraph 52.37(5) of Chapter CRE52 of the Consolidated Basel Framework, requires that the terms of the contract must be reset so that the fair value of the contract is zero. Hence, for a contract whose fair value after reset is not zero, the reset date cannot be taken as the remaining maturity of the contract for the purposes of the SA-CCR approach.
Q25.	**Is an AI required to use the SA-CCR approach to calculate amounts of its default risk exposures in respect of matured derivative contracts that are pending for settlement?**
A25.	Yes. The amount of default risk exposure calculated by the SA-CCR approach is intended to measure the risk that the counterparty could default before the final settlement of the derivative contracts' cash flows (see the definition of "counterparty credit risk" in §2(1) of the Banking (Capital) Rules). Hence, the AI's default risk exposures in respect of matured derivative contracts that are pending for settlement should also cover the period between maturity dates of the contracts and their final settlement dates.
Q26.	**If the answer to Q25 is yes, is the AI still required to calculate the potential future exposures of those matured derivative contracts (given their delivery amounts are fixed, i.e. there will not be any further change in the values of the contracts)?**
A26.	Yes. The AI should calculate the potential future exposure according to subdivision 4 of Division 1A of Part 6A subdivision 4 of the BCR.

Conversion between years and days

Q27.	**In §226BZE(1), should the denominator (i.e. 1 year) in Formula 23AZB be converted into, say, 250 business days, considering that the numerator (i.e. $MPOR_i$) is often expressed in days? Similarly, in other sections where time is expressed in years but subject to floors expressed in business days, should the floors be converted into years in the same way, i.e. dividing the floor concerned by 250 (e.g. a floor of 10 business days is equal to 10/250 year)?**
A27.	If there is a need to convert the unit of time from business days into years or vice versa, the conversion must be made by using the standard market convention applicable to the derivative contracts and the financial markets concerned. For example, 1 year may be converted into 250 business days. Similarly, 10 business days can be converted into years by dividing it by 250.

Haircut value of net collateral held

Q28.	**If there is a legally enforceable binding agreement to link a CLN issued to a designated portfolio of OTC derivative contracts with a counterparty such that any default loss in respect of the portfolio will be borne by the holder of the CLN once the counterparty is in default, can the CLN be classified as a recognized credit risk mitigation ("CRM") and captured in SA-CCR calculation?**
A28.	Since the CRM in question is considered a credit derivative contract instead of collateral under the BCR, the CLN concerned must not be included in the calculation of the haircut value of net collateral held under the SA-CCR approach. However, an AI may still recognise the CRM effect of the CLN in accordance with the provisions applicable to recognized credit derivative contracts in Part 4, 5 or 6, as the case requires, if the credit derivative contract embedded in the CLN meets all the applicable recognition criteria set out in the BCR (e.g. §99). More specifically, when an AI calculates the risk-weighted amount of the default risk exposure in respect of the designated portfolio of OTC derivative contracts under Part 4 of the BCR, the AI may determine the credit protection covered portion of the default risk exposure in accordance with §101(8) of the BCR.

3. ***IMM(CCR) approach***

Calculation of current exposures

Q29.	**§3(e)(i) of Schedule 2A requires an AI to compute current exposures using current market data. Clarification is sought as to whether current market data include market implied data.**
A29.	In Schedule 2A §3(e)(i), "current market data" means any directly observed market

	data (e.g. interest rates, equity prices, etc.), or data implied (e.g. option implied volatility) by other observable prices, as of the valuation date. In other words, for the purpose of computing current exposures, "market implied data" is interpreted more narrowly, i.e. it only means data implied by current (as opposed to past) market data.

Stressed effective EPE

Q30.	**Under §226D(1)(b), an AI is required to use a stress calibration as set out in §3(f) of Schedule 2A to calculate a stressed IMM(CCR) risk-weighted amount. Clarification is sought on the length of the stress period that should be used.**
A30.	§226D(1)(b) requires an AI to calculate a stressed IMM(CCR) risk-weighted amount using a stress calibration which must include a period of stress to the credit default spreads of the AI's counterparties. The length of such period is not specified. The AI should select the stress period based on its specific circumstances and the characteristics/profile of its CCR exposures. As required by §3(g) of Schedule 2A, the AI must assess the soundness and adequacy of the stress calibration regularly (at least quarterly). The period of stress selected is expected to be one of the items covered by this regular assessment. The assessment procedures and results are subject to review by the HKMA as part of its on-going supervisory process. Moreover, the HKMA may require an AI to adjust the stress calibration if the comparison conducted by the AI as required by §3(g)(iii) of Schedule 2A shows that the exposures of the benchmark portfolios deviate from each other substantially.
Q31.	**For the purposes of §226D(1)(b), should the credit spread stress period be at the centre of the 3-year period mentioned in §3(f) of Schedule 2A (i.e. there will be an equal length of time before and after the credit spread stress period)?**
A31.	There is no such requirement. When applying to the HKMA for approval to use the IMM(CCR) approach, an AI should discuss and agree with the HKMA the approach / methodology for determining and reviewing the stress period.
Q32.	**For the purposes of §226D, how frequent should the Effective EPE calculated using current market data be compared with the Effective EPE calculated using a stress calibration?**
A32.	When applying to the HKMA for approval to use the IMM(CCR) approach, an AI should discuss and agree with the HKMA the frequency at which the comparison required by §226D(2) should be conducted. Generally, the AI should expect the frequency of comparison to be at least quarterly. The HKMA may require the AI to increase the agreed frequency if the HKMA considers that such frequency is no longer adequate because of, for example, material changes in the level or nature of the AI's derivatives activities or significant increase in market volatilities.

Collateral

Q33.	**Under §226K(3), an AI may take into account the effect of collateral that is not cash of the same currency as the default risk exposure concerned if the AI applies standard supervisory haircuts to the collateral. Clarification is sought on how the haircut for currency mismatch should be applied to mixed currency exposures.**
A33.	For the purposes of §226K(3)(b), the standard supervisory haircut applicable in consequence of a currency mismatch (i.e. 8%) should be applied to each element of the collateral that is provided in a currency different from that of the exposure. For example, if cash in US dollars is provided by a counterparty as collateral in respect of performance under a derivative contract, and the default risk exposure to the counterparty of the contract is partly denominated in Euro and partly denominated in Japanese Yen, the currency mismatch haircut should be applied to that portion of the collateral covering the Euro denominated exposure, and likewise for the portion of the collateral covering the Yen denominated exposure.
Q34.	**If an AI uses both the IMM(CCR) approach and the SA-CCR approach to calculate the amounts of its default risk exposures to a counterparty (this may happen if the AI's IMM(CCR) approval only covers a certain category of transactions or the AI is permitted, under §10B(5) or (7), to use the SA-CCR approach for certain transactions), how should the collateral posted by the counterparty be allocated across the different calculation methods?**
A34.	The AI has to split the original netting set into two new netting sets, one that is subject to the IMM(CCR) approach and the other that is subject to the SA-CCR approach. The AI is free to decide how the collateral posted by the counterparty should be allocated between the two netting sets. However, no double-counting of the collateral is allowed.

4. ***Current exposure method***

Q35.	**How should the credit conversion factor ("CCF") applicable to a debt security contract (i.e. a derivative contract the value of which is determined by reference to the value of, or any fluctuation in the value of, one or more than one underlying debt security or underlying debt security index) be determined under the current exposure method set out in Division 2A of Part 6A?**
A35.	An AI should determine the primary risk factor of the contract and classify the contract into one of the following types based on the primary risk factor so determined: (a) Interest rate contract; (b) Credit-related derivative contract;

	(c) Exchange rate contract; (d) Equity-related derivative contract; (e) Commodity-related derivative contract; (f) Derivative contract other than the above. A debt security contract is usually an interest rate contract or a credit-related derivative contract. The CCF applicable to the contract is then determined in accordance with Table 23AI in §226MD.
Q36.	**How recognized netting is taken into account under the current exposure method?**
A36.	For simplicity, the modified current exposure method ("CEM") set out in Division 2A of Part 6A of the BCR does not take into account recognized netting in the calculation. As a result, each derivative contract covered by a valid bilateral netting agreement should be treated under the CEM as if it were not covered by such agreement.

5. ***Securities financing transactions (SFTs)***

Calculation of amount of default risk exposure

Q37.	**Clarification is sought as to whether an SFT arranged by an AI as agent is subject to capital charge.**
A37.	Where an AI, acting as an agent, arranges an SFT between a customer and a third party and provides a guarantee to the customer that the third party will perform on its obligations, then the risk to the AI is the same as if the AI had entered into the transaction as a principal. In such case, the AI must calculate capital requirement for the SFT as if it were itself the principal.
Q38.	**Is it correct that if an AI uses the STC approach and the comprehensive approach in its treatment of recognized collateral, the amount of the default risk exposure of the AI's nettable SFTs can be calculated in accordance with §226MK?**
A38.	Yes. The understanding is correct.

Haircut floors for SFTs[1]

Q39.	**If there is a non-zero minimum transfer amount ("MTA") agreed between an AI and its counterparty for SFTs, does the amount of "collateral that is called" referred to in §226ZED(5) and §226ZEE(5) include any amount that is below the MTA and has not been called?**
A39.	"Collateral that is called" only includes the amount that is actually called by the counterparty or the AI. If an amount has not been called, such amount should not be counted in "collateral that is called".
Q40.	**If an amount below the MTA is notified to the counterparty but there is no actual transfer of collateral taking place, could the amount "notified" be considered as "collateral that is called"?**
A40.	The amount "notified" cannot be considered as "collateral that is called" because the notification will not be followed by a transfer of the amount "notified" from the counterparty to the AI. Only collateral calls that will result in a transfer of the collateral called to the AI are taken into consideration in assessing whether the haircut floor is complied with.

6. ***Exposures to CCPs***

Supervisory approval

Q41.	**If an AI has been granted an approval to use the IMM(CCR) approach for a specific product, does the AI need to obtain further approval from the HKMA to use the IMM(CCR) approach, as the case may be, for the centrally cleared version of the product?**
A41.	Under §10B(9), an AI must obtain the prior consent of the MA before making any significant change to any approved internal model. Hence, further approval is needed if the inclusion of the centrally cleared version of the product would require significant change to the approved internal models concerned.

Determination of a CCP's status

Q42.	**Who will determine whether a CCP is qualifying?**
A42.	It is the primary responsibility of AIs to determine whether a CCP is qualifying. If a CCP regulator has provided a public statement on whether a CCP is qualifying

[1] Division 5 of Part 6A of the BCR on haircut floors for SFTs has not yet commenced operation.

	or non-qualifying, then AIs may rely on the statement to determine the appropriate capital treatments for their exposures to the CCP. Otherwise, AIs should determine whether a CCP is qualifying based on the criteria set out in paragraph (a) of the definition of "qualifying CCP" ("QCCP") in §226V(1). AIs should be prepared to provide the HKMA with a list of CCPs to which they have exposures, including the AIs' evaluation of the relevant criteria in respect of each such CCP. If a CCP ceases to be a QCCP because it no longer meets all the criteria set out in paragraph (a) of the definition of "qualifying CCP" in §226V(1), a 3-month grace period is available during which AIs may calculate the capital requirements for their exposures to the CCP as if the CCP were a QCCP (see §226ZC(1)). If a CCP in a jurisdiction outside Hong Kong calculates its counterparty credit risk exposures to its clearing members using methods other than a method that is consistent with the SA-CCR published by the Basel Committee (thus failing to meet the description in paragraph (a)(iii) and (iv) of the definition of "qualifying CCP" in §226V(1)), an AI may deem such CCP as a QCCP under §1(1) of Schedule 16 provided that all the conditions set out in §1(2) of that Schedule are met.
Q43.	**If a jurisdiction outside Hong Kong has published on or before 30 June 2021 its SA-CCR rule but the mandatory compliance date has not yet been announced, is a CCP in such jurisdiction eligible for the transitional arrangement provided for under Schedule 16?**
A43.	Yes. In such case, the end date of the transition period (i.e. the period during which the CCP can be regarded as a QCCP) will be known once the mandatory compliance date is announced by the jurisdiction concerned.
Q44.	**If the information mentioned in paragraph (a)(i) and (ii) of the definition of "qualifying CCP" in §226V(1) in respect of a CCP is not publicly disclosed, how should an AI assess whether the CCP is a qualifying CCP?**
A44.	If such information is not made available to market participants by the relevant regulatory authority of the jurisdiction concerned or is not otherwise made available by the CCP, this may call into question about the adequacy and transparency of the jurisdiction's CCP regulatory regime. The HKMA is prepared to provide assistance on a case-by-case basis if an AI has difficulties in determining whether a CCP meets any one or more of the criteria set out in the definition of "qualifying CCP".

Default fund exposures (applicable to all QCCPs)

Q45.	**Is collateral posted as default fund contributions to a QCCP subject to standard supervisory haircuts in the computation of K_{AI}?**

A45.	No. When using Formula 23K in §226X(4) to calculate the capital requirement (K_{AI}) for default fund contributions made by an AI, there is no need to apply haircuts to the value of any default fund contribution made by the AI in the form of collateral posted.
Q46.	**If the default fund contributions from clearing members of a QCCP are segregated by product types such that default fund contributions for a particular product type are accessible only for that particular product type, should the K_{AI} in Formula 23K be calculated separately for each product type?**
A46.	In this case, K_{AI} in Formula 23K should be calculated separately for each product type. For this purpose, the AI should seek to ascertain whether data provided by the QCCP concerned, the QCCP's regulator or other bodies enable calculation of K_{AI} on such a basis.

Default fund exposures (applicable to QCCPs falling within paragraph (a) of the definition of "qualifying CCP" in §226V(1))

Q47.	**What if a QCCP, though being informed by its AI clearing members about an increase in risk-weight under §226X(5), fails to provide K_{ccp} calculated based on the increased risk-weight?**
A47.	If the QCCP has not adopted the new risk-weight for K_{ccp} calculation after the lapse of the grace period provided for under §226X(6), an AI may continue to use the K_{ccp} provided by the QCCP for the purposes of §226X(4) provided that the AI scales up the K_{ccp} in a linear way by a factor corresponding to the increase in the risk-weight required under §226X(5), e.g. if the risk-weight is to increase from 20% to 50%, the factor is 2.5.

Default fund exposures (applicable to QCCPs falling within paragraph (b) of the definition of "qualifying CCP" in §226V(1))

Q48.	**Under §226X(4) of the pre-amended Rules (as defined in Schedule 16), there are two methods that an AI can use to calculate the capital requirements for default fund exposures to QCCPs. Is it acceptable for an AI to apply one method to certain QCCPs and at the same time apply another method to other QCCPs?**
A48.	Yes. AIs may select the appropriate method to use separately for each QCCP. Moreover, the selection is not a one-off process. An AI may at any time reconsider its decision and change the method applied to a QCCP.

Q49.	**Under §226X(6) of the pre-amended Rules (as defined in schedule 16), should the calculation of RWA $_{(TE+DF)}$ be performed for each CCP separately? Or should it be performed for all CCP exposures combined?**
A49.	The calculation should be performed for each CCP separately. However, if the default funds of a QCCP are segregated by product types such that the default fund for a particular product type is accessible only for that particular product type, the calculation should be performed for each segregated default fund separately.

Portability of trades

Q50.	**§226ZA(6)(c) states that relevant laws, regulations, rules, contractual or administrative arrangements provide that the offsetting transaction between the CCP and the clearing member is highly likely to continue to be indirectly transacted through the CCP….". Without further guidance, it is difficult to determine what "highly likely" would mean in practice.**
A50.	If there is a clear precedent for transactions being carried over and continued at a CCP and industry intent for this practice to continue, then these factors should be considered when assessing if trades are highly likely to continue to be transacted for the purposes of §226ZA(6)(c). The fact that CCP documentation does not prohibit client trades from being carried over and continued is not sufficient for saying they are highly likely to be carried over and continued. Other evidence such as the criteria in §226ZA(6)(c) is necessary to make this claim.

Segregation of collateral

Q51.	**Further explanation is sought as to the meaning of the part of §226ZA(6)(a) which requires collateral to be held under arrangements that prevent any losses to the institution due to default or insolvency of the clearing member and/or any of the clearing member's other direct clients.**
A51.	The requirement set out in §226ZA(6)(a) essentially means that upon the insolvency of the clearing member, there is no legal impediment (other than the need to obtain a court order to which the AI is entitled) to the transfer of the collateral belonging to the AI to the CCP, to one or more of the other surviving clearing members or to the AI or the AI's nominee. Hence, AIs should look at the collateral segregation arrangements adopted by CCPs in respect of collateral posted by clearing members and their direct clients, and demonstrate to the satisfaction of the HKMA, that the arrangements can achieve the level of protection required by §226ZA(6)(a) if they want to benefit from the preferential risk-weight of 2% or 4%.

Exposures of indirect clients within a multi-level client structure

Q52.	**What necessary modifications to §226ZA(6) are needed for the purposes of §226ZBA(5)(a) and (b)?**
A52.	Because indirect clearing was a concept introduced in the European Markets Infrastructure Regulation (EMIR) and it is less likely that locally incorporated AIs would be part of an indirect clearing arrangement that involves more than four parties (i.e. a QCCP, a clearing member, a direct client of the clearing member and the end client), the discussion below assumes all transactions are cleared according to a "principal-to-principal" clearing model and focuses on the modifications to §226ZA(6) necessary for an AI, as an end client, to determine whether its default risk exposure to the direct client could be risk-weighted as if it were a default risk exposure to the QCCP. §226ZBA(5)(a) requires the conditions in §226ZA(6), with all necessary modifications, to be met for arrangements among the QCCP, clearing member, all clients at levels higher than the AI within the multi-level client structure, and the AI. To this end— (a) in evaluating the arrangements among the QCCP, clearing member and direct client against §226ZA(6)— (i) any reference to "institution" in §226ZA(6) would be construed as a reference to the direct client who provides clearing services to the AI; (ii) §226ZA(6)(a) would be construed in the context of the collateral posted by the direct client in respect of the offsetting transaction related to its CCP-related transaction with the AI. The following illustrates modifications that would generally be needed: "the offsetting transaction with the CCP ~~for the~~ ~~relevant transaction~~ is identified by the CCP as ~~a clearing~~ an indirect client transaction and the collateral for supporting the offsetting transaction is held by the CCP or the clearing member, or both, as applicable, under arrangements that prevent any losses to the ~~institution~~ direct client due to— (i) the default or insolvency of the clearing member; (ii) the default or insolvency of the clearing member's other direct clients; and (iii) the joint default or joint insolvency of the clearing member and any of its other direct clients;"; and (iii) §226ZA(6)(c) would be construed to refer to the transfer of the direct client's positions and assets relating to the AI to a back-up clearing member; and (b) in evaluating the arrangements between the direct client and the AI against §226ZA(6)—

(i) §226ZA(6)(a) would be construed in the context of the collateral posted by the AI to the direct client. The following illustrates modifications that would generally be needed:

"the offsetting transaction with the ~~CCP~~ clearing member ~~for the relevant transaction~~ is identified by the ~~CCP~~ clearing member as ~~a clearing~~ an indirect client transaction and the collateral for supporting the offsetting transaction is held by the CCP, ~~or~~ the clearing member or the direct client, or ~~both~~ all or any two of them, as applicable, under arrangements that prevent any losses to the institution due to—

(i) the default or insolvency of the ~~clearing member~~ direct client;

(ii) the default or insolvency of the ~~clearing member~~ direct client's other ~~direct~~ clearing clients; and

(iii) the joint default or joint insolvency of the ~~clearing member~~ direct client and any of its other ~~direct~~ clearing clients;"; and

(ii) §226ZA(6)(c) would be construed to refer to a scenario where the direct client defaults or becomes insolvent. The AI is required to assess whether it is highly likely that the assets and positions held by the direct client for the account of the AI will be transferred to another direct client or another clearing member. The following illustrates modifications that would generally be needed:

"relevant laws, regulations, rules, contractual or administrative arrangements provide that the offsetting transaction between the ~~CCP~~ clearing member and the ~~clearing member~~ direct client is highly likely to continue to be indirectly transacted through the ~~CCP~~ clearing member or another clearing member, or by the ~~CCP~~ clearing member or another clearing member, if the ~~clearing member~~ direct client defaults or becomes insolvent, and in such circumstances, the institution's positions and collateral ~~with the CCP~~ will be transferred at market value unless the institution requests to close out the positions at market value".

Similar adaptation also applies for the purposes of §100(7)(a)(iii) and (b)(ii), §134(6)(a)(iii) and (b)(ii), §216(3B)(a)(iii) and (b)(ii), and §217(5)(a)(iii) and (b)(ii).

Any modification made to the conditions set out in §226ZA(6) should not result in modified conditions that are less stringent than what the Basel Committee has intended.

Collateral posted

Q53.	**What treatment must a clearing member apply to collateral that is collected from its direct client and posted to a CCP, but that is not held in a bankruptcy-remote manner?**

A53.	If the clearing member is not obligated to reimburse the direct client for any loss of such posted collateral in the event that the CCP defaults, the clearing member is not subject to capital requirements for the posted collateral. If the clearing member is obligated to reimburse the direct client for any loss of posted collateral in the event the CCP defaults, the clearing member should compute the capital requirement for the posted collateral held by the CCP as an exposure to the CCP.
Q54.	**Clarification is sought on the interactions among §226ZE, Divisions 1A, 2, 2A and 2B of Part 6A.**
A54.	Unsegregated collateral posted by an AI for securing counterparty credit risk arising from derivative contracts or SFTs should have been included in the calculations conducted under Division 1A, 2, 2A or 2B of Part 6A. Hence, §226ZE(1) and (2) only apply to unsegregated collateral posted by the AI for other purposes (see §226ZE(6A)) and §226ZE(5) and (6) were repealed to avoid duplication of the requirements in §226ZA (see §226ZE(7)(a)). Unless otherwise specified in the BCR, the amounts of default risk exposures calculated under Divisions 1A, 2 and 2A of Part 6A do not include segregated collateral posted by an AI. §226ZE(3) and (4) are intended to confirm similar capital treatment for segregated collateral posted by an AI in relation to its centrally cleared transactions.