

Frequently asked questions on capital treatment of exposures to counterparty credit risk and central counterparties

General - supervisory approval

Q1.	Clarification is sought on whether prior approval by the MA is required for the following items: <u>IMM(CCR) approach</u> (a) §10B(7) – the use of methods other than the IMM(CCR) approach to calculate the default risk exposures in respect of certain contracts or transactions; <u>Advanced CVA method</u> (b) §226P(6), paragraphs (d)(ii) and (e) in Formula 23F – the methodology for determining the appropriate proxy spread; (c) §226Q(3)(a) and §3(f)(i) of Schedule 2A – the methodology for determining the stress periods that should be used for calculating the stressed VaR; <u>Eligible CVA hedges</u> (d) §226T(2) and (3) – the ability to reflect 100% of the notional amount of an index credit default swap hedge. A1. For item (b), the methodology should form part of the approved internal models for calculating the market risk capital charge for specific risk for interest rate exposures under the IMM approach. If this is not the case, the AI concerned may need to use the standardized CVA method for the counterparty concerned as required by §10C(2). In any case, the AI should consult the HKMA about the appropriate treatment. As regards the other items, no prior approval is needed but they will be subject to the HKMA’s supervisory review process. It is an AI’s responsibility to ensure that the methodologies, models and procedures, including items (a) to (d) mentioned above, for identifying, measuring and controlling CCR are sound and prudent. According to Annex H of the SPM module CA-G-5 “Supervisory Review Process”, the HKMA will review an AI’s CCR management systems and controls in the HKMA’s normal supervisory review process. The HKMA’s review may include scrutiny and assessment of the documentation of the independent review conducted through the AI’s internal audit process on any internal models used for CCR management and/or capital calculation purposes, and of the associated governance arrangements and internal controls with a view to ascertaining whether they meet the supervisory requirements set out in the respective B(C)R provisions.
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IMM(CCR) approach

Calculation of current exposures

Q2.	§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.
A2.	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

Q3.	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.
A3.	§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.
Q4.	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)?
A4.	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.

Q5.	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?
A5.	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

Q6.	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.
A6.	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.
Q7.	If an AI uses both the IMM(CCR) approach and the current exposure method to calculate 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 current exposure method for certain transactions), how should the collateral posted by the counterparty be allocated across the different calculation methods?
A7.	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 current exposure method. 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.

Margin period of risk

Q8.	If there is an illiquid transaction or collateral in a netting set, when should the higher supervisory floor under §226M(3) be applied to the netting set?
A8.	The supervisory floor of 20 business days applies immediately once a netting set falls within §226M(3).
Q9.	Under §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 §226M(1)?
A9.	The supervisory floors set out in §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 the determination of default risk exposures may be longer than the supervisory minima if the liquidity of the positions concerned warrants it.

CVA capital charge

Frequency of calculation

Q10.	Is an AI required to calculate the CVA capital charge daily?
A10.	As an AI is required to maintain at all times capital adequacy ratios that are not lower than the respective minimum regulatory levels applicable to it, the HKMA expects the AI to have the system capability to calculate the CVA capital charge on a daily basis (a lower frequency may be acceptable in the case of AIs using the standardized CVA method with insignificant derivative activities), but in general the AI would not be expected or required to calculate the CVA capital charge on a daily basis. However, the calculation frequency should be at least monthly under normal situations or more frequent as warranted by market conditions. The CVA capital charge should also be re-calculated whenever there are significant changes in the AI's counterparty portfolios or events that are likely to have material impact on the amount of the CVA capital charge.

Inter-company transactions

Q11.	Are inter-company transactions subject to a CVA capital charge?
A11.	Under §30(3) and §31(2), inter-company transactions between an AI and its subsidiaries subject to consolidation can be excluded from the calculation of the

	solo-consolidated / consolidated capital adequacy ratio (in other words, the transactions are not subject to a CVA capital charge). These transactions include CVA hedges that are with an internal desk.
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Advanced CVA method

(i) LGD

Q12.	Under §226P(7), an IRB AI is not allowed to use the LGD determined under the IRB approach for a counterparty in the calculation of the CVA capital charge for that counterparty. Why?
A12.	Due to the mark-to-market nature of CVA risk, the pricing of the CVA risk is based on LGD_{MKT} which is a market assessment of the loss given default of the counterparty concerned. In other words, LGD_{MKT} should be consistent with the derivation of the hazard rates and therefore must reflect the market expectations of recovery rather than the mitigants or experience specific to the AI.
Q13.	Under §226P(6), LGD_{MKT} should be based on the spread of a market instrument or a proxy spread. However, there are situations where both a market spread and a proxy spread are not available for a counterparty (e.g. the identification of a market spread or a proxy spread for sovereign entities is often not possible other than in distressed periods). Clarification is sought on the calculation of LGD_{MKT} under these situations.
A13.	For the purposes of §226P(6) paragraph (e) in Formula 23F, as it is the market convention to use a fixed recovery rate for CDS pricing purposes, the AI may use this information to calculate the LGD_{MKT} if both a market instrument of the counterparty concerned and an appropriate proxy spread are not available and there is no other information.
Q14.	How should an AI take into account potential security packages or other credit enhancement provisions that could be available in the Credit Support Annex or the trade confirmation?
A14.	AI-specific risk mitigants should not be taken into account in the LGD_{MKT} calculation. If the netting set concerned has a different seniority than the market instrument used to infer LGD_{MKT} , the AI may adjust the LGD_{MKT} to reflect such difference in seniority.

(ii) Stress calibration

Q15.	§226Q(3)(a) requires an AI to calculate the stressed VaR using a stress calibration as set out in section 3(f)(i) of Schedule 2A and §226Q(4) states that the period of stress must be the most severe one-year stress period within the 3-year period concerned. Clarification is sought as to whether
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	the 1-year stress period for the purposes of §226Q(3) must be the same 1-year stress period used for calculating the stressed VaR under Part 8 (Calculation of market risk).
A15.	The two periods of stress need not be the same.

(iii) Credit spread

Q16.	Under §226Q(3), an AI is required to calculate a stressed VaR based on EEs that are estimated using a stress calibration. Clarification is sought on whether the input s_i in Formulas 23F to 23I will remain the same for both the VaR calculation under §226Q(2) and the stressed VaR calculation under §226Q(3).
A16.	It depends on the specific risk VaR model. If the VaR model uses a sensitivity (or Greek) based approach, the credit spread values in the 1st and 2nd-order sensitivities (as in §226P(9), (10) and (11)) are the current levels (i.e. as of the valuation date) for both unstressed VaR and stressed VaR. In contrast, if the VaR model uses a full-revaluation approach (as in §226P(6)), the credit spread inputs should be based on the relevant stress scenarios.
Q17.	According to §226P(6) paragraph (d)(ii), if the CDS spread of a counterparty is not available, a proxy spread must be used. For counterparties (e.g. SMEs) where no market data (neither CDS spreads nor traded debts) is available, it is hard to validate VaR modelling based on proxy index spreads. In such case, should the advanced CVA method or standardized CVA method be used?
A17.	As mentioned in the answer to Q1 the methodology for determining the proxy spread should be part of the approved internal models for calculating the market risk capital charge for specific risk for interest rate exposures under the IMM approach. If the methodology for determining the proxy spread of the counterparties in question does not fall within the scope of the approval concerned (e.g. because the MA is not satisfied that the methodology is robust), the AI will need to use the standardized CVA method for these counterparties as required by §10C(2).

(iv) Backtesting

Q18.	Does a specific backtesting on the CVA VaR need to be conducted or is the backtesting of the market risk VaR considered as relevant also for the CVA VaR?
A18.	AIs are not required to conduct a separate VaR backtesting for the purposes of the CVA capital charge.

Standardized CVA method

Q19.	Clarification is sought on paragraph (f) in Formula 23J as to how W_{ind} should be determined with the average spread of index “ind”.
A19.	Theoretically, implied default probabilities could be extracted from the average spread, which could then be used to determine W_{ind} based on the relationship between the implied default probabilities and external credit ratings. Alternatively, AIs may first determine the weight (w) applicable to each of the constituents of index “ind” in accordance with paragraph (b) in Formula 23J and then calculate the weighted average of w (using the weight of each constituent in the index for weighting w). The weighted average of w may be regarded as a proxy of the W_{ind} derived from the average spread of index “ind” and may be used to map to the appropriate weight in Table 23A or 23B. However, the appropriate weight should not be less than the weighted average of w calculated. For example, if the weighted average of w is 1.4%, the AI should use 2%, instead of 1%, as the input to Formula 23J.

Eligible CVA hedges

Q20.	Can short bond positions be regarded as eligible CVA hedges?
A20.	For AIs that use the Advanced CVA method, single name short bond positions may be regarded as eligible CVA hedges under §226T(1)(c)(iii) if the basis risk is captured by their approved VaR models and the other conditions set out in §226T(1) are met. For AIs that use the Standardized CVA method, if they intend to recognize single name short bond positions as eligible CVA hedges, they should first provide a written explanation to the HKMA on how they propose basis risk will be captured by Formula 23J to enable the HKMA to be satisfied that such capture is adequate before they proceed to recognize single name short bond positions.
Q21.	Is a CDS indirectly referencing a counterparty (e.g. buying sovereign protection against a derivative exposure to a majority-state-owned enterprise) an eligible CDS hedge?
A21.	Under §226T(1)(e), hedges that depend on cross-default are not eligible CVA hedges.
Q22.	Clarification is sought as to whether §226T(1)(e) means that a single name CDS for which an AI uses proxies (e.g. a sovereign CDS on a country against the AI's exposure to a province in that country) cannot be considered an eligible CVA hedge even if the VaR model of the AI captures the basis risk between the exposure concerned and the CVA hedge, or §226T(1)(e) refers to instruments other than single-name CDS, that pay out only if there is more than one default event.

A22.	§226T(1)(e) is aimed at single name proxy hedges, regardless of whether the basis risk between the exposure and the hedge is appropriately captured by an AI's VaR model. As an example, consider the following counterparties and index: (a) Counterparty A: no CDS traded on its name; (b) Counterparty B: has CDS traded on its name and its spread is used to approximate the spread of counterparty A (i.e. counterparty B is considered similar to counterparty A in terms of credit risk profile and therefore can be used as a proxy of counterparty A); (c) Index C: Counterparty B is one of the constituents of the index. In this example, if an AI has a CVA exposure to counterparty A and wants to reduce the CVA capital charge for counterparty A, the only eligible CVA hedge is a CDS on index C (assuming that the conditions in §226T(2) are met). A single-name CDS on counterparty B is not an eligible CVA hedge for counterparty A. To avoid doubt, this does not prevent an AI from using the spread of counterparty B to approximate the spread of counterparty A under §226P(6) paragraphs (d) and (e) in Formula 23F.
Q23.	According to §226T and Schedule 1A, AIs must calculate a CVA capital charge for their contracts or transactions with sovereigns and sovereign CDS can be recognized as eligible CVA hedges. Please confirm whether this understanding is correct.
A23.	The understanding is correct.
Q24.	Is a single-name CDS swaption an eligible CVA hedge?
A24.	Yes, it can be regarded as an eligible CVA hedge under §226T(1)(c)(iii) provided that the swaption does not contain a knock-out clause, that is, the swaption is not terminated following a credit event. Otherwise, the swaption will not be regarded as equivalent to a single-name credit default swap.
Q25.	If an AI, which has bought CDS protection against the default of a counterparty, is providing a liquidity facility or another kind of credit enhancement to the protection provider, whereby the AI is effectively exposed to a certain tranche of the underlying default risk of the counterparty, is the CDS protection an eligible CVA hedge? The liquidity facility or credit enhancement would be on accrual accounting so that no CVA risk is transferred back to the AI via that facility.
A25.	For the purposes of §226T(1), an AI should take into account all related transactions between the AI and the protection provider of a CVA hedge when determining whether the hedge is an eligible CVA hedge. For example, if an AI buys CDS protection from a SPE in a synthetic securitization transaction for the default risk of a pool of assets and provides a liquidity facility to the SPE with terms and conditions under which the advances under the facility are

	subordinated to other claims on the cash flows from the assets, the facility in effect transfers a tranche of the default risk of the assets back to the AI. In this case, the CDS protection is in effect a tranching CDS and therefore is not an eligible CVA hedge (see §226T(1)(d)), regardless of whether the liquidity facility is on accrual accounting. (Note: The example is to illustrate how default risk can be transferred back to the AI from the credit protection seller. In practice, the CDS protection is unlikely to meet the requirement set out in §226T(1)(a) and therefore is not an eligible CVA hedge anyway.)
Q26.	Clarification is sought as to whether credit derivative contracts under the ISDA Credit Derivatives Determinations Committees and Auction Settlement CDS Protocol (“the Big Bang Protocol”) can be regarded as recognized credit derivative contracts under the B(C)R.
A26.	In order for a credit derivative contract to be recognized for the purposes of calculating the risk-weighted amount of an exposure, the credit derivative contract must, among other things, specify clearly the identity of the person who is empowered to determine whether a credit event has occurred, that person is not solely the protection seller and the institution is, under the terms of the credit derivative contract, entitled to inform the protection seller of the occurrence of a credit event (see §99(1)(p)). It is confirmed that credit derivative contracts under the Big Bang Protocol can still meet the requirement in §99(1)(p) on the grounds that- • the protection buyer has the right/ability to request a ruling from the Determinations Committee, so the buyer is not powerless; and • the Determinations Committee is independent of the protection seller. This means that the roles and identities are clearly defined in the Protocol, and the determination of a credit event is not the sole responsibility of the protection seller.

Exposures to CCPs

Q27.	If an AI has been granted an approval to use the IMM approach or IMM(CCR) approach for a specific product, does the AI need to obtain further approval from the HKMA to use the IMM approach or IMM(CCR) approach, as the case may be, for the centrally cleared version of the product?
A27.	Under §10B(9) and §18(4), 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

Q28.	Who will determine whether a CCP is qualifying?
A28.	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 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 the definition of “qualifying CCP” (“QCCP”) in §226V(1). The most critical criterion is paragraph (b) of the definition. Set out below is some guidance on the approach AIs may adopt in assessing whether paragraph (b) is met. (i) During 2013, if a CCP regulator has not yet implemented the CPSS-IOSCO Principles for Financial Market Infrastructures (PFMIs), but has publicly stated that it is working towards implementing the PFMIs, the CCPs that are regulated by the CCP regulator may be treated as QCCPs unless the CCP regulator declares a specific CCP non-qualifying. In Hong Kong, the HKMA and the SFC announced in March 2013 their commitment to comply with the PFMIs. AIs therefore can regard CCPs overseen by the SFC as QCCPs for capital adequacy purposes. (ii) If a CCP regulator has not made any public statement about its intention to implement the PFMIs during 2013, or a CCP regulator has yet to implement the PFMIs (regardless of whether a public statement referred to in (i) has been made) after 2013, AIs should determine whether a CCP regulated by the CCP regulator is qualifying based on the criteria set out in the definition of “qualifying CCP” in §226V(1), in particular, whether the rules and regulations adopted by the CCP regulator are consistent with the PFMIs. For this purpose, AIs may disregard paragraphs (c) and (d) of the definition of “qualifying CCP” when determining whether a CCP is a QCCP unless the AIs will use Formula 23K to calculate the capital charge for their default fund contributions made to the CCP (see §226X(5)). 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. As mentioned above, an important consideration for this purpose is whether a CCP is subject to domestic rules and regulations that are consistent with the PFMIs. If an AI uses Formula 23K to calculate the capital charge for its default fund contributions to a QCCP and subsequently the CCP ceases to be a QCCP because it no longer complies with paragraph (c) or (d) of the definition of “qualifying CCP” in §226V(1) (for example, when a new clearing service is provided or there are any substantial structural/system changes such as mergers and acquisitions), 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)). During 2013, if a CCP ceases to be a QCCP because of the aforesaid reason and the CCP is working to comply with paragraph (c) or (d), as the case may be, the MA may consider lengthening the grace period, by exercising his power under §226ZC(2), to not more than 1 year.
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Default fund exposures

Q29.	Under §226X(4), there are two methods that an AI can use to calculate the capital requirements for default fund exposures to qualifying CCPs. Is it acceptable for an AI to apply one method to certain qualifying CCPs and at the same time apply another method to other qualifying CCPs?
A29.	Yes. AIs may select the appropriate method to use separately for each qualifying CCP. 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 qualifying CCP.
Q30.	Under §226X(6), should the calculation of $RWA_{(TE+DF)}$ be performed for each CCP separately? Or should it be performed for all CCP exposures combined?
A30.	The calculation should be performed for each CCP separately. However, if the default funds of a qualifying CCP 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.
Q31.	If the default fund contributions from clearing members of a CCP 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?
A31.	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 CCP concerned, the CCP's regulator or other bodies enable calculation of K_{AI} on such a basis.

Portability of trades

Q32.	§226ZA(6)(c) states that relevant laws, regulations, rules, contractual or administrative arrangements provide that the offsetting transaction with 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.
A32.	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.
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Segregation of collateral

Q33.	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 clients.
A33.	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 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%.