



Inter-CCP Risk Management Standards

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1. Introduction

The European Code of Conduct for Clearing and Settlement (“the Code”) was published in November 2006 by the three main industry associations – the Federation of European Securities Exchanges (FESE), the European Association of Central Counterparty Clearing Houses (EACH) and the European Central Securities Depositories Association (ECSDA) – and has been signed by all their members active in cash equity markets and some organisations that are not members of any of those Associations. The Code aims at enhancing transparency and increasing competition in the post-trading sector. As stated in the Code *“The ultimate aim is to offer market participants the freedom to choose their preferred provider of services separately at each layer of the transaction chain (trading, clearing and settlement) and to make the concept of “cross-border” redundant for transactions between EU member States”*.

The measures detailed in the Code address three main issues:

- (i) transparency of prices and services;
- (ii) access and interoperability;
- (iii) unbundling of services and accounting separation.

For each of the measures above a deadline for implementation was set; all measures were addressed by the end of 2007.

"Access" and "Interoperability" are used in the specific meaning of the Code, i.e. Access subject to the access conditions specified in paragraphs 23 and 25-33 of the Code of Conduct and Interoperability subject to the Interoperability conditions specified in paragraphs 24 and 34-37 of the Code of Conduct.

The specific Access and Interoperability Guideline which was published in June 2007 applies to all links covered in the Code of Conduct, i.e. links for trading platforms, CSDs and CCPs. This paper specifically covers the interoperability between CCPs and outlines the Risk Management Standards that should be adhered to.

In setting out the Inter-CCP Risk Management Standards for Interoperability (hereinafter “ICRM Standards”), care has been taken to ensure that the CPSS-IOSCO Recommendations and the EACH Standards, that detail comprehensive international guidance for CCP risk management, are respected and not jeopardised or contradicted in any way. CCPs that follow the CPSS-IOSCO Recommendations are structured to take on risk from their member firms and collateralise such risk under ‘normal’ market conditions; extreme but plausible market conditions are covered through the use of post-default backing arrangements such as default funds, insurance and capital. The intention being, as outlined

in Recommendation 5 of the CPSS-IOSCO Recommendations, that *CCPs* “...*should maintain sufficient financial resources to withstand, at a minimum, a default by the participant to which it has the largest exposure in extreme, but plausible, market conditions*”. As such it will only be “exogenous market shocks” of extreme and unprecedented magnitude that could cause the default of a *CCP*.

One of the fundamental concepts of the ICRM Standards is that *CCPs* are essentially a different type of risk-taking vehicle with respect to other financial institutions. All *CCPs* are structured differently and that their approach to risk management and their associated risk protections, or ‘recipes’, will vary.

CCPs typically operate in similar, but not necessarily identical, manners when managing risk; primary risk protections are generally standard amongst *CCPs*, these include:

- membership requirements;
- daily marking-to-market;
- the calculation of *initial margin* to cover potential future losses in ‘normal’ market conditions; and
- in extremis some form of post-default backing to cover exceptional market events.

However, practical issues such as:

- payment and collateral timings;
- legal arrangements;
- regulatory oversight;
- insolvency laws; and most notably
- the balance of risks intended to be covered by *initial margin* and those covered by the, often mutualised, post-default backing

are often arranged differently in each *CCP*, so that the exact approach and the overall risk management ‘framework’ is typically different for each *CCP*.

This diversity of approaches to risk management creates practical difficulties in the determination of standards that are applicable to all *CCPs* regardless of their respective ‘frameworks’ for managing risk in relation to the CPSS-IOSCO Recommendations. This automatically brings about the recognition that there are multiple legitimate approaches to fulfilling the *CCP* tasks.

Accordingly, the ICRM Standards in this document are intended to recognise these differences and to provide both the *Requesting* and *Receiving* parties under the Code of Conduct with a standard framework to determine whether:

- a request for interoperability, and the associated and essential risk management aspects of such a request, are reasonable;

- the risks inherent within any interoperability links are managed in a prudent way that is consistent with both the CPSS-IOSCO Recommendations and the EACH Standards;
- what can and should be bilaterally negotiated between parties.

Document Structure:

This document is structured in 4 parts:

Scope: This chapter briefly introduces the background to the creations of this document as well as detailing the purpose and mission of this paper.

Standards: Lists the key principles which have been agreed to by the EACH members as terms of reference for inter-CCP risk management.

Explanatory Terms: Is a terms of reference for the abbreviations and naming conventions used in this document

Appendix: Supporting material for the Standards.

2. Scope

A Central Counterparty (*CCP*) interposes itself between counterparties to financial contracts traded in one or more financial market, becoming the seller to the buyer and the buyer to the seller.

The ICRM Standards have been designed to apply to all *CCPs* that are aiming to establish an interoperable link with one or more other *CCP*. These ICRM Standards relate in particular to CPSS-IOSCO Recommendation 11 (*“Risk in Links between CCPs”*) and Article 81 of the Access and Interoperability Guideline (*“Key standards for cross-CCP transactions defined by the Receiving CCP”*).

These ICRM Standards have been set in the context of the existing Code of Conduct which, at the time of writing, applies exclusively to cash equities. It is stated in the Code that *“Organisations may apply all, or some, of the provisions of the Code to other instruments if they so choose”*. However, the ICRM Standards would need to be reassessed should the Code of Conduct be extended in the future to cover other asset classes.

These ICRM Standards should be read in conjunction with the Access and Interoperability Guidelines; in particular they are intended to interpret the provisions of Article 81 and to define in more detail what can reasonably be requested on risk management grounds under the Code and what can legitimately be refused between *CCPs*.

These ICRM Standards are also intended to supplement Article 84 of the Guidelines (*“CCPs will recognise the specific status of each other as CCPs and not as risk-taking intermediaries”*).

This document considers the inter-*CCP* risk management issues and primarily the market and credit risk issues that arise from interoperability. The process for assessing the risks focuses on credit and market risks arising out of a *CCP*'s activity.

The Access and Interoperability Guideline contemplates, in Articles 75-85, differing types of *link arrangements* and differing types of Access. These ICRM Standards only apply under Articles 78-85 and apply to peer-to-peer and sub-*CCP* interoperability models and are applicable to both the *Receiving* and *Requesting CCPs* for these types of *link arrangements* under the Code.

It should be noted that the ICRM Standards which are referenced in this document are based on information available to the risk management representatives of the respective clearing organisations who cooperated in generating this reference document, at the time of writing. Documents referenced within, or used to inform, these ICRM Standards are listed below:

	Document Name	Date
1	EACH Standards of Risk Management Controls used by Central Counterparty Clearing Houses (“EACH Standards”)	November 2001
2	CPSS-IOSCO Recommendations for Central Counterparties (“CPSS-IOSCO Recommendations”)	November 2004
3	European Code of Conduct for Clearing and Settlement (“the Code”)	7 November 2006
4	Access and Interoperability Guideline (“the Guideline”)	28 June 2007

3. Standards

Standard 1: Compliance with International Risk Management Standards

- 1.1. The CPSS-IOSCO Recommendations, along with the EACH Standards, provide clear guidelines for *CCPs* for risk management; all *CCPs* signed up to the Code should adhere to them as defined in the Guideline (i.e. CPSS-IOSCO Recommendations should be at least broadly observed). Compliance with the EACH Standards and CPSS-IOSCO Recommendations for both the *Receiving* and *Requesting CCPs* should not in any way be compromised in order to establish an *interoperability arrangement*. Article 82 of the Guideline states that interoperability should deliver “*no damage to risk management principles or approaches*”. *CCP to CCP* interoperability will therefore need to be fully compliant with “*CPSS-IOSCO Recommendation 11*”, which states that “*CCPs that establish links, either cross-border or domestically, to clear trades should evaluate the potential sources of risk that can arise, and ensure that the risks are managed prudently on an ongoing basis*”.
- 1.2. As subsequently detailed in ICRM Standard 5, *CCPs* will carefully evaluate the potential sources of risks arising from setting up an interoperability arrangement, ensuring that the resulting arrangements manage these risks effectively, so that all linked *CCPs* are still able to observe the EACH Standards and CPSS-IOSCO Recommendations. In addition, a *CCPs* participation in an Interoperability link should not jeopardise its capacity to fulfil its obligations towards its clearing members whether or not they are using the link.

Standard 2: No competition on risk grounds

- 2.1. It is implicit in the Code (in particular reference to Article 1 which states that *"the ultimate aim is to offer market participants the freedom to choose their preferred provider of services separately at each layer of the transaction chain"*) that competition between service providers, in particular *CCPs*, is a benefit of the desired market structure. However, risk management practices should be exempt from this part of the Code and it should not be read in any way as implying that risk management can be used as a competitive tool amongst *CCPs*. There can be competition between *CCPs* on prices or services offered to market participants, but there should be no purposeful competition on the level of risk coverage (for example the relaxing of risk management standards and controls in select new markets) or risk measurements of the *CCP* in relation to market participants for the sake of seeking competitive advantage relative to an alternative *CCP*. Article 13 in the Access and Interoperability Guideline states that *"Competition between CCPs must not have a significantly detrimental effect on risk management standards in place."*
- 2.2. One of the most obvious elements where risk management could potentially be used competitively is in the area of *initial margin* rate setting. *Initial margin* levels must not be set at imprudently low levels that may jeopardise the risk management of either the *Receiving* or *Requesting CCP*, with the aim of using these margin levels as a competitive tool to appear more attractive to market participants. In the event that *CCPs* compete on the level of margin requirements it is clear that the market would see a downward spiral of risk protections which would be to the detriment of all the *CCPs* concerned and the financial system as a whole. This must be avoided at all costs as a consequence of interoperability.
- 2.3. For clarity, this ICRM Standard does not mean that all linked *CCPs* must use the same *margin methodology* or risk algorithm to calculate margin requirements for their participants, or that the level of risk measurement¹ needs to be equal. As mentioned previously it should be accepted and understood that different *margin methodologies* exist among *CCPs* with each having different balances of risk between their member-specific margin requirements and the, often mutualised, post-default backing. This is consistent with Article 83 in the Access and Interoperability Guidelines which states that *"no CCP can be forced to change their initial margin methodology, algorithm or parameters that are used towards its participants"*.

¹ Risk measurement relates to the algorithms, parameters, confidence intervals and intended margin coverage at individual asset class, portfolio or group cash equity level.

- 2.4. In general, neither the *Requesting* nor *Receiving CCPs* should make exceptions to their existing policies on margin coverage and on post-default backings for any market where they have a *link arrangement* in place. Both *CCPs* should act in a consistent and risk prudent manner without jeopardising in any way CPSS-IOSCO Recommendation 4 regarding margin requirements which states that “a *CCP* should use models and parameters that capture the risk characteristics of the products cleared”.
- 2.5 For the avoidance of doubt this means that margins should be set in such a way that there is no cross-subsidisation between different markets or asset classes; lower margins for one market should not be subsidised by unduly higher margins collected for another market. For the avoidance of doubt, this does not mean that margin offsets are prohibited.
- 2.6 Modifications to *margin methodologies* or coverage that are required to comply with local market practices and/or regulatory requirements that conflict with home market regulatory requirements may be made, provided these do not materially affect the risk profile of the *Requesting CCP* and meet home market regulatory approval.
- 2.7 However, it is clear that both the *Requesting* and *Receiving CCPs* must be free to amend and develop their processes, procedures and practices as they see fit in order to improve and develop their risk management activities, provided that they continue to meet the CPSS-IOSCO Recommendations and EACH Standards. This includes an ability to make changes to their desired risk coverage or their risk management algorithms for the calculation of margin or the structure and amount of its post-default backing. In the event that either the *Requesting* or *Receiving CCP* makes such a change it must be consistent with the principles of section 2.4 above. The *CCP* which is making the change to its algorithm must be entirely transparent as to the *initial margin* and *back testing* coverage of the new model in accordance with Recommendation 6.2 below.

It is worth noting that this does not mean that the overall quality of a *CCP's* risk management framework is not a factor or business consideration of market participants and stakeholders, it means that *CCPs* should not be altering (specifically relaxing) its risk management policies as a means of seeking competitive advantage in select markets. This is particularly true if it would result in a contradiction to the CPSS-IOSCO Recommendations or EACH Standards.

Standard 3: Recognition of the nature and regulatory status of CCPs

- 3.1. The Access and Interoperability Guidelines refer to the fact that CCPs should be considered to be different to other institutions on the financial markets; Article 78 states that “*the Receiving CCP recognises the Requesting CCP in its nature and regulatory status as a CCP and vice versa*”. Article 84 states that “*CCPs will recognise the specific status of each other as CCPs and not as risk-taking intermediaries*”.
- 3.2. Although CCPs are usually incorporated as standard legal entities and often recognised and regulated as such, they are not proprietary risk takers. The fact that exposures to CCPs are eligible for zero values for regulatory capital weightings purposes that most regulators recognise the fact that CCPs are not proprietary market risk taking intermediaries and are tightly regulated, and are therefore more creditworthy than other types of financial institutions, particularly those which are designed to assume proprietary market and credit risks. The *link arrangements* between a *Requesting* and *Receiving CCP* under the Code should recognise that CCPs have significantly lower risk profiles than other credit-based financial institutions for the following reasons:

1	CCPs are subject to regulatory supervision by competent authorities; in many cases by dedicated staff;
2	CCPs have stringent membership requirements, including both financial and operational criteria, that are aimed at ensuring that participants can meet obligations arising from participating in the market;
3	CCPs are required to monitor and measure their exposures towards their participants – and then fully collateralise them – on at least a daily basis, many frequently seek additional collateral for their exposures intra-day. This collateralisation is intended to ensure that CCPs have sufficient collateral in the event of a default of a market participant in ‘normal’ market conditions;
4	CCPs are non-speculative; due to the nature of a CCP’s role in the markets, a CCP does not speculate on financial markets in order to make a profit; in the absence of operational errors and counterparty default a CCP has a flat position in the markets it clears;

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- 5** *CCPs* are not proprietary risk-taking entities in the same way as other financial institutions; i.e. they do not seek to profit by putting their equity at risk, a *CCP's* role is to provide risk management for market participants – they are therefore naturally risk averse;
 - 6** In addition to the margin requirements that are fully collateralised daily, CPSS-IOSCO Recommendations stipulate that *CCPs* should be specifically designed to withstand the default of at least their largest participant under the most extreme market conditions; as such they have additional layers of post-default backing that supplement their margin protections. This post-default backing usually consists of one or more of default/clearing funds, insurance and capital which is regularly measured as being sufficient to cover exceptional market shocks and associated financial consequences of the default of (at a minimum) a *CCP's* largest participant. As such it will only be exogenous shocks of extreme and unprecedented magnitude coinciding with the simultaneous default of the *CCP's* largest participant, or several participants, that could cause the default of a *CCP*. This goes as far as is reasonably possible to remove systemic concerns.
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Standard 4: Measurement and management of exposures to linked CCPs

- 4.1. As stated in Article 84 of the Access and Interoperability Guidelines “*no CCP is obliged to contribute to the other CCP’s Default Fund or other post-default backing schemes*”. However, the risk exposure between linked CCPs should be measured - at least daily - by all CCPs involved in link agreement(s). The subsequent decision on whether to secure the exposures between linked CCPs will depend upon the desired risk coverage of the CCPs involved and should be bilaterally agreed, however if bilateral agreement between the CCPs cannot be reached then the Receiving CCP will decide. This is consistent with Article 84 of the Access and Interoperability Guidelines, which states that CCPs have to “*arrange an adequate collateralisation scheme to cover the exposure of potential losses*”.
- 4.2. As stated in Article 81 of the Access and Interoperability Guidelines “*the Receiving CCP will define for cross CCP transactions – the risk management model (subject to ... guidelines ... which ensure fair and non-discriminatory treatment of both CCPs)*”. For the avoidance of doubt, and recognising the lower risk of a CCP as outlined in ICRM Standard 3, the credit risk mitigation scheme between the Receiving and Requesting CCPs does not need to follow the same collateralisation arrangements that a CCP has with its participants. Indeed, an adequate credit risk mitigation scheme can include either one or both of the Receiving or Requesting CCP deciding not to insist on the provision of security: providing that this does not weaken either CCPs compliance with the CPSS-IOSCO Recommendations, the EACH Standards or the requirements set by their regulators.
- 4.3. The measurement of risk exposures between linked CCPs does not necessarily need to take place intra-day and should not lead to intra-day calls for additional collateral. Sudden and unpredictable intra-day calls could create a strain on CCPs’ liquidity resources and create operational and administrative demands and distractions which are counterproductive to the normal operations of the respective CCPs and which are not practical to administer. Specific provisions which provide for the ability for linked CCPs to request additional funds from each other intraday should be bilaterally agreed between the individual CCPs and specifically referenced in the link agreement(s).

- 4.4. The *Requesting* and *Receiving CCPs* should agree in what form the provision of inter-*CCP* security should take; the frequency and timing of requesting such provision; and the timescales by which there is a need to respond to a request for additional security. Any collateral should be in the form of liquid instruments, the exact specifications of what constitutes 'liquid' should be agreed bilaterally (collateralisation within two days at a maximum), however, if bilateral agreement between the *CCPs* cannot be reached, then the *Receiving CCP* will decide. In accordance with ICRM Standard 7 *CCPs* should be encouraged to negotiate and agree to as practical and flexible arrangements as possible, recognising each respective *CCP's* status and financial strength, as determined by each respective *CCP's* risk assessment of the other *CCP(s)*, and fully respecting the terms of ICRM Standard 1 that the arrangements must not jeopardise any *CCP's* capacity to fulfil its obligations to its own members.
- 4.5 Once a *CCP* has measured its exposure, it should ensure that its measurement is consistent with its desired risk coverage; if the nature and the size of the exposures changes significantly, then either *CCP* must be able to amend the form and nature of credit risk mitigation.
- 4.6 If it is agreed between the *Receiving* and *Requesting CCPs* that they should collateralise the inter-*CCP* exposures, the rules governing the types of acceptable collateral, the operational procedures and any collateral haircuts will be determined by the *CCP* receiving the collateral. For the avoidance of doubt this does not mean that the *Receiving CCP* (as defined in the Guidelines) is able to decide on behalf of the other *CCP* but that both *CCPs* are able to make their own independent risk management decisions in respect of accepted collateral.
- 4.7 The form of credit risk mitigation and the calculation of the risk exposure should also take into consideration the administrative costs involved with putting such arrangements in place or amending the amounts and form of security provided. These arrangements should include thresholds bi-laterally agreed between the *Receiving* and *Requesting CCPs* to determine how large the increase in exposure needs to be before additional cover is requested.

Standard 5: Performance of Inter-CCP Risk Assessment

- 5.1. CPSS-IOSCO Recommendation 11 states “before entering into a link relationship with another CCP, a CCP should evaluate the potential sources of risk arising from the link”.
- 5.2. Both the *Receiving* and *Requesting* CCP should undertake an appropriate counterparty risk assessment when seeking to establish a link arrangement. The risk assessment should include sufficient understanding of the entirety of the other CCP’s risk arrangements, including any other link arrangements under the Code or otherwise. It is the entirety of the risk management, legal, regulatory and especially operational arrangements that contribute to the determination of the creditworthiness of the CCP.
- 5.3. The risk assessment will provide the information required for a *Receiving* CCP to make a risk management decision on whether to accept a request under the Code. If a CCP can demonstrate that it meets the CPSS-IOSCO Recommendations, ICRM Standards and EACH Standards it should serve as evidence towards the approval of any proposed link arrangements. However, the decision of link approval is typically tied to a broader list of criteria which are covered as part of the link counterparty risk assessment which the respective CCPs are expected to conduct when making such counterparty risk decisions. The Appendix details factors that both the *Receiving* and *Requesting* CCP should consider when conducting inter-CCP risk assessment (the list is not intended to be exhaustive).
- 5.4. Once a link arrangement has been entered into there should be regular communication between the CCPs. The CCPs should agree on a level of information sharing and for the prompt notification of any material adverse changes, as detailed in ICRM Standard 6: Transparency between CCPs.
- 5.5. The risk assessment information should be refreshed regularly, typically annually, but this will depend upon the counterparty assessment standards of the respective CCPs concerned. Absent any material adverse changes on the part of any linked CCP, we would not expect the ongoing counterparty risk assessment once a link is in place to be in any way a significant administrative burden on either CCP; refreshing of information, in the absence of substantial or material adverse change should not be prohibitively time-consuming for either party. It is expected that details on what the standard information sharing responsibilities are; the frequency of risk assessment updates; and how such updates are to be coordinated, to be detailed in the link agreement.

Standard 6: Transparency between CCPs

- 6.1. When a link arrangement has been established, the linked CCPs have an obligation to transparently share relevant, non-proprietary, risk management information. The legal agreements relating to the link arrangements should provide for this sharing of information and ensure it remains confidential. Article 55 of the Access and Interoperability Guideline states that *“the receiving organisation may require the requesting organisation to guarantee confidentiality of its commercially sensitive information provided to the latter in order to achieve customised access or interoperability”*. We would not expect risk management information to be determined as commercially sensitive but we would expect standards of confidentiality to apply to the regular sharing of risk management information.
- 6.2. We would expect the following information to be shared between the *Receiving* and *Requesting CCP*:

- 1** Any material change to the following should be notified promptly to any linked CCP:
 - Rules or Regulations;
 - Financial standing;
 - Capital;
 - New interoperability or other link with a CCP; and
 - Any material adverse change that may affect the risk profile of the CCP.It is recommended that this be specifically addressed in any link agreement.
- 2** Where a CCP has either been externally or internally assessed against the CPSS-IOSCO Recommendations, it should be possible to see the CCP's self or third party assessment(s) detailing the degree of compliance with the Recommendations.
- 3** Sharing of information relating to common market participants is particularly important; especially if that information is relevant to the creditworthiness of the CCP or is regarding the event of default (rather than 'technical default') of a member firm. It is clear that where a CCP is in the position of managing the market risk of the positions of a member firm in default, or where a CCP believes it will soon be in this position, that this information should be shared with a linked CCP.

4 Summary *back testing* results should be available to linked *CCPs* to enable them to assess the adequacy of the margining methodology and margining practices of the respective *CCP(s)*. Results should show how margins perform in relation to observed market moves over a historic period. This should be viewed in conjunction with the *CCP's* stated aimed coverage for that market, and in line with the CPSS-IOSCO Recommendations on *back testing*.

6.3. The administrative burden on linked *CCPs* should be minimised in relation to the sharing of information.

Standard 7: Operational flexibility

- 7.1. With any link arrangements between European *CCPs*, there will be operational issues regarding discrepancies between business hours; different holiday calendars and different time zones. The imposition of link arrangements will ensure that the *Requesting CCP* operates on every business day that the *Receiving CCP's* cash equity market is open in order to provide clearing for that market. However, there may be issues such as the *Requesting CCP's* bank guarantee provider (in a case where security is provided by a third-party guarantor) being closed on a business day when the *Receiving CCP's* market is open; this would mean that the *Requesting CCP* would be unable to provide security to fulfil its usual obligations under the link arrangement that day; therefore the *Receiving CCP* should provide flexibility on such days to allow the *Requesting CCP* additional time to provide cover in these circumstances. These details should be incorporated into the formal link agreements between respective *CCPs*.
- 7.2. Article 49 in the Access and Interoperability Guidelines defines the 'Operational efficiency principle' – "*the operational efficiency of financial markets will not be significantly weakened by the development of new links*". The flexibility referenced above does not in any way contravene this operational efficiency principle.

4. Explanatory terms

CCP	Central Counterparty - As stated in the Access and Interoperability Guidelines Article 12 an entity “ <i>whose CCP activities are subject to supervision as a CCP by a competent authority in Europe; or where there is no such specific regulatory status:… it must be currently assessed by its competent national authorities as observing CPSS-IOSCO Recommendations for Central Counterparties 1-6, 8, 10 & 11; at least broadly observe all other recommendations and as observing the recommendations as an overall assessment; and Central Counterparty clearing must be clearly separated from other risk taking activities of the Organisation.</i> ”
Requesting CCP	A <i>CCP</i> that wishes to establish an interoperable link arrangement with another <i>CCP</i> (the “ <i>Receiving CCP</i> ”) in order to clear the cash equity market already cleared by that <i>CCP</i> .
Receiving CCP	A <i>CCP</i> that is approached by another <i>CCP</i> (the “ <i>Requesting CCP</i> ”) to establish an interoperable link arrangement to clear a cash equity market that the <i>Receiving CCP</i> is already clearing.
Confidence level	The degree of certainty that a forecast will be met. In this context it means the degree of certainty that <i>initial margin</i> will be sufficient to cover observed profit and loss.
Margin Methodology	The models used by a <i>CCP</i> to calculate <i>initial margin</i> on a specific contract or portfolio.
Initial Margin (IM)	The estimate of the worst case loss on a contract or portfolio over an assumed close-out period for the position held under normal market conditions.
Link Arrangement	An arrangement put in place between two or more <i>CCPs</i> to allow multilateral clearing of a particular cash equity (under interoperability) or other market.
Back testing	An assessment of the adequacy of <i>initial margin</i> by testing how well the <i>initial margin</i> held has performed against observed profit and loss over a certain period. This measure enables all <i>initial margin</i> methodologies to be compared on a like-for-like basis.
Linked Positions	The balancing positions between the two linked- <i>CCPs</i> under a Link Arrangement that are the subject of risk management.

Appendix: Factors to be considered between Receiving and Requesting CCPs

Factors to be considered when performing inter-CCP risk assessment (not intended to be mandatory or exhaustive):

Fundamentals	Ownership (stability/support/diversity) Credit Rating (entity/parent) Organisational governance framework Management quality
	Complexity of business (markets/products cleared) Market(s) cleared (Type/size/maturity) Member quality (criteria/assessment/profile) Liquidity management policy Systemic Risk (probability/history)
Financials	Financial performance (profitability) Financial resources Capital (adequacy/structure/how held)
Links	Existing links (markets/structure/quality/management)
Risk	Operational risk management Risk Management Framework Risk Management resources (number/experience/stability) Structure and scale of post-default defences (Default Fund/Insurance/Capital) Default handling (framework/Procedures/History)
Margins	Margin distribution (membership/products/markets) Margin system reliability Margin performance (<i>back testing/validation/confidence level</i>) Margining methodology (robustness/appropriateness)
Collateral	Collateral management (legal arrangements) Collateral quality/restrictions (investment policy/acceptable collateral)
Legal/Regulatory	Internal and external audit Framework Legal framework Regulatory environment(s) CCP's compliance with CPSS-IOSCO Recommendations and EACH Standards Internal Rules & Regulations Security controls
Information sharing	Due diligence oversight Transparency of information
General	Language Time zone(s) Unique risks Country risk