



EUROPEAN CENTRAL BANK

EUROSYSTEM

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**ESCB/CESR CONSULTATION PAPER**

**DRAFT RECOMMENDATIONS FOR CENTRAL  
COUNTERPARTIES  
1-2, 4-8, 14, and 15  
REVISED FOR CCPs CLEARING OTC DERIVATIVES**

**Deadline for contributions:** The ESCB and CESR invite responses to this consultation paper by **17 April 2009**. All contributions should be submitted to the **European Central Bank**, Secretariat Division, Kaiserstrasse 29, D-60311 Frankfurt am Main and submitted online via **CESR's website** under the heading 'Consultations' at [www.cesr.eu](http://www.cesr.eu). All contributions received will be published following the close of the consultation, unless the respondent requests their submission to be confidential.



## INTRODUCTION

### Applying ESCB/CESR Recommendations to CCPs clearing OTC derivatives

1. In view of the financial stability risks posed by the growing scale of OTC derivatives exposures and in particular credit derivatives, the ECOFIN emphasised the need to support appropriate initiatives to reduce those risks, notably by developing one or more (or expanding existing) European CCPs to serve the OTC derivatives markets. In this context, at its meeting on 2 December 2008, the ECOFIN invited ESCB and CESR to adapt the Recommendations for CCPs to explicitly address the risks of OTC derivatives.
2. In response to the ECOFIN's invitation, the ESCB/CESR Working Group (hereinafter "the Group") studied the matter and analysed a wide range of aspects relevant for the clearing of OTC derivatives in general and of credit derivatives in particular, including issues related to access, the protection of non clearing participants, risk management requirements, challenges related to the handling of credit events for CDS, dispute resolutions, price transparency, various operational aspects, governance issues, and potential risks in links between CCPs. Given that the clearing of OTC derivatives is evolving rapidly, any developments in this field will continue to be monitored and analysed.
3. OTC derivatives are diverse and in many cases relatively non-standardised instruments. With that in mind, the Group has concluded that the Recommendations for CCPs are generally well designed to capture also the specific features of the risks inherent in the clearing of OTC derivatives, but identified several areas where additional clarifications in the relevant explanatory memoranda and in the related methodology would be helpful. It is also important to recognise that OTC derivatives are globally traded products and that therefore it will be important to develop a consistent international regulatory approach through continued dialogue with CPSS and IOSCO.
4. The Group considered that most of the risks in clearing of OTC derivatives do not significantly differ in nature from those of clearing on-exchange transactions. However, in view of the greater complexity of OTC derivatives and the relative illiquidity of certain contracts, the Group considered that risk management could differ and, therefore, it was essential for CCPs to be as transparent as possible for both regulators and users and to ensure effective risk management. This is reflected in a number of recommendations, for example,



regarding the determination of credit events for CDS and the way they are handled, the different types of risks related to the clearing of specific products as well the different risk models and approaches to conduct the margining in each case, the structure and contributions to a clearing fund, and the way CCPs obtain and/or calculate prices that are needed as a basis for margin calculations.

5. The Group also concluded that some requirements are specific for the clearing of credit derivatives, while others are generally relevant for all types of OTC derivatives. For example, some amendments have been introduced in view of handling credit events which are specific to credit derivatives. Many other aspects and amendments, including those relating to transparency, concern the clearing of OTC derivatives in general. The Group has made an effort to mark clearly which amendments are relevant for credit derivatives only and which amendments are relevant for OTC derivatives in general.
6. The Group also identified some relevant aspects of risk that affect entities other than CCPs and are therefore beyond the scope of the ESCB/CESR Recommendations but may have a bearing on CCPs. Clearing members may provide clearing for other market participants, so called non-clearing participants, which may be non-supervised entities. These entities may be a source of risk for clearing members. The relevant supervisors may wish to investigate the relationship between a clearing member and non clearing participants and address the potential risks for institutions offering services for all the products cleared by the CCPs and in particular for the clearing of OTC products.
7. For the handling of credit events and the resolution of disputes, CCPs are encouraged to adopt widely accepted practices that already exist in this field or are currently under development by relevant international bodies. The Group calls on these bodies to provide harmonised and effective operational solutions where they do not yet exist, for example for the handling of restructuring credit events for CDS. The Group also invited these bodies to involve users and CCPs in the design of these solutions.
8. Central storage of contract details for OTC trades, or 'data warehouses', contain the primary record of each contract and are fundamental for the process of clearing OTC derivatives in general and credit default swaps in particular. The current scope of the Recommendations only extends to CCP's management of its relationship with a warehouse. The role of data warehouses has been analysed by the CPSS report on "New developments in clearing and settlement for OTC derivatives" of March 2007. Such central storage of data can be provided by CCPs and/or by a range of alternative market infrastructures. Given the number of European entities active in the OTC market, relevant authorities have a keen interest to have



unrestrained access to relevant data for the purpose of spotting trades and monitoring open interests in this market. The operation of an efficient and effective trade information database should meet a number of objectives, including, inter alia, reporting to competent authorities and supervision, transparency, legal soundness, governance, operational resilience and, - where they are not an integral part of the CCP - fair access criteria. There are therefore a range of relevant aspects of the recommendations on legal and operational risks, governance, interoperability and participation requirements. There may therefore be a need for more relevant and targeted recommendations applicable to warehouses themselves. To this end, a co-operative oversight framework needs to be developed at global level for warehouses that serve multiple markets, which should also ensure uninhibited access of supervisors to information held by trade warehouses. For reasons of legality, supervision and business continuity, CESR will study the usefulness of such a facility, established and supervised in the EU for transactions in European instruments and its possible objectives, scope and functions, and plans to consult the market on the study's outcome in the course of 2009

9. As mandated by the ECOFIN on 2 December 2008 in order to ensure global consistency, ESCB and CESR coordinated with the CPSS and IOSCO with a view to taking up similar work in respect of the RCCPs of November 2004. A similar recommendation has been recently addressed to CPSS and IOSCO also by the G-20. Once this work is finalised, the Group will review the respective ESCB/CESR Recommendations to ensure consistency.
10. Furthermore, following the request from the ECOFIN in June 2008, CEBS has compared the relevant ESCB/CESR draft Recommendations with the Capital Requirements Directive (CRD) and other relevant EU Directives and Level 3 guidance applicable to custodian banks. CEBS has found that where custodian banks internalise settlement or CCP-like activities, some of the draft recommendations are either not met or only partially/indirectly met by the CRD and/or other relevant banking regulation.<sup>1</sup> To gather evidence about the extent to which such activities are performed by custodian banks (i.e. the internalisation of settlement or CCP-like activities), CEBS has launched in February 2009 a call for evidence to its members and market participants.<sup>2</sup> CEBS is currently analysing the responses received and expects to publish a report in early April 2009.
11. In addition, the European Commission entered into discussion with the main market participants to ensure CCP clearing of Credit Default Swaps (CDS) in Europe. On 17 February 2009, the majority of the main CDS dealers committed to clear CDS on European

<sup>1</sup> CEBS's report to the ECOFIN: <http://www.c-esb.org/getdoc/a9671a67-1dd7-407f-82f8-ca1df2692f6f/CEBS-PUBLISHES-ITS-REPORT-TO-THE-ECOFIN-ON-CUSTODI.aspx>.

<sup>2</sup> CEBS' call for evidence: <http://www.c-esb.org/getdoc/97f1930b-8855-45d7-9faa-7f9d9a7f0414/CEBS-publishes-a-call-for-evidence-for-custodian-b.aspx>.



reference entities and indices based on these entities through one or more European CCPs by 31 July 2009. The European Commission has convened the main market players and regulators to form a Working Group on Derivatives. This Working Group will continue to meet on a monthly basis until the end of July 2009, with the primary objective to monitor the actual implementation of the commitment and to ensure that both users and infrastructures work on the enhancement of safety and transparency of OTC derivatives markets in general and CDS in particular.

12. Finally, the Group would like to emphasise that there are a number of further aspects beyond central counterparty clearing that may be considered to help improving the trading, transaction processing, and risk management infrastructures supporting the OTC markets, including wider adoption of electronic trading, faster and automated affirmation/confirmation of all derivatives trades, further use of settlement services and wider adoption of portfolio reconciliation and compression. Many of these aspects have already been identified and analysed by the CPSS report on “New developments in clearing and settlement for OTC derivatives” of March 2007. Some of these measures are included in the Recommendations 2 and 3 of the RSSS section of this report. Others may need to be addressed elsewhere.



**PART 2:**  
**DRAFT RECOMMENDATIONS FOR CENTRAL COUNTERPARTIES**



## RECOMMENDATION 1: LEGAL RISK

### A The recommendation

*CCPs, linked or interoperable CCPs should have a well-founded, transparent and enforceable legal framework for each aspect of their activities in all relevant jurisdictions.*

### B Key issues

1. The laws, regulations rules, procedures, and contractual provisions governing the operation of a CCP, of linked CCPs or of interoperable CCPs (see Recommendation 11) should be clearly stated, internally coherent, and readily accessible to participants and the public. Information to the public should include those topics specified in C.11.
2. The legal framework should provide a high degree of assurance for each aspect of a CCP's operations and risk management procedures.
3. The rules, procedures, and contracts of a CCP should be enforceable if a CCP participant, a linked CCP or an interoperable CCP or a participant in a linked or interoperable CCP defaults or becomes insolvent. There should be a high degree of assurance that actions taken under such rules and procedures may not later be stayed, avoided or reversed
4. A CCP should identify and address any potential conflicts of laws issues arising from cross-border arrangements. In doing this, the CCP's analysis should include the laws intended to cover those elements specified in C.8.
5. In accordance with the relevant national implementation provisions, all CCPs should apply for designation under the Settlement Finality Directive 98/26/EC on settlement finality in payment and securities settlement systems, as amended (hereinafter referred to as the Settlement Finality Directive). The relevant authorities should actually designate the systems that meet the criteria of the Settlement Finality Directive.

### C Explanatory memorandum

1. A well-founded legal framework should support each aspect of a CCP's risk management and operations for all cleared products. The legal system (including bankruptcy laws) should clearly support: novation or open offer, acceleration and termination of outstanding obligations, netting, default procedures, collateral and clearing fund arrangements, enforceability of a CCP's rules with regard to its participants, insolvency of the CCP, a CCP's



conflict of laws determinations, and a CCP's access to information about participants and, directly or indirectly, about underlying customers. Further, the laws and regulations governing a CCP, a CCP's rules, procedures and contractual arrangements, and a CCP's timing of assuming its obligations should be clearly stated, internally coherent and readily accessible to participants and the public. If the legal framework is underdeveloped, opaque or inconsistent, the resulting legal risk will undermine a CCP's ability to operate effectively. Financial market participants will face the dilemma of either: (1) using a CCP with an incomplete ability to assess their risk of participation; or (2) declining to use a CCP. Under either circumstance, the risk reduction benefits of a CCP may not be realised and, depending on the significance of weaknesses in the legal framework, the activity of a CCP could be a potential source of systemic risk.

2. In most jurisdictions, the legal concept that enables a CCP to become the counterparty is either novation or open offer. Through novation, the original contract between the buyer and seller is extinguished and replaced by two new contracts, one between the CCP and the buyer and the other between the CCP and the seller. In an open offer system, a CCP is automatically and immediately interposed in a transaction at the moment the buyer and seller agree on the terms. If all pre-agreed conditions are met, there is never a contractual relationship between the buyer and seller in an open offer system. Both novation and open offer give market participants legal certainty that a CCP is obligated to effect settlement if the legal framework is supportive of the method used.
3. A CCP may accept trades from a range of sources, including exchanges, electronic trading platforms, and over-the-counter markets. In order to determine the obligations of the CCP and its participants and the risks they face, the legal terms defining and governing the contracts of these trades must be certain. A CCP's rules and procedures should set out the relevant contractual terms and make clear the extent to which a CCP relies on the legal framework or determinations of third-parties (e.g. determination concerning the handling of credit events). Recognising that a CCP will generally only ever serve a subset of a given product market, use of widely accepted market definitions should be made provided that such use does not create legal uncertainty.
4. The legal framework should support the essential steps that a CCP takes to handle a defaulting or insolvent participant, including any transfers and closing out of a direct or indirect participant's positions. A CCP must act quickly in the event of a participant's default, and ambiguity over the enforceability of these procedures could delay, and possibly prevent altogether, a CCP from taking actions that fulfil its obligations to non-defaulting participants or minimise its potential losses. Insolvency law should support isolating risk and retaining





and applying collateral (including margin) and cash payments previously paid into a CCP, notwithstanding a default or the commencement of an administration or bankruptcy proceeding by or against a participant.

5. The legal framework must enable a CCP to clearly establish its interest in collateral (including margin). Generally, collateral arrangements involve either a pledge or a title transfer. If a CCP accepts a pledge, it must have a high degree of assurance that the pledge has been validly created in the relevant jurisdiction and validly perfected, if necessary. If a CCP relies on a title transfer, it should have a high degree of assurance that the transfer will be enforced as written and not recharacterised as an invalid or unperfected pledge.
6. A strong legal framework will support the rapid deployment of the collateral held by a CCP when a participant defaults on its obligations or becomes insolvent. This aspect of the legal framework is critical because delay in the use of collateral may prevent a CCP from meeting its obligations as expected. The legal framework will accomplish this goal if the rules, procedures and contracts for operating a CCP and the obligations of its participants are enforceable, and a CCP has the unimpeded ability to liquidate collateral and close out transactions. This means that actions taken by a CCP under such rules and procedures may not later be stayed, avoided or reversed.
7. The enforceability of a CCP's netting arrangements must also have a sound and transparent legal basis. Netting involves the offsetting of obligations by trading partners or participants. CCPs often bilaterally net their obligations with each participant. Netting reduces the number and value of deliveries and payments needed to settle a set of transactions and significantly reduces the potential losses to a CCP in the event of a participant's default. Some CCPs also net gains and losses from the close out of positions in different securities or derivatives. Netting arrangements must be enforceable against a CCP's failed participants in bankruptcy, and the legal framework should support the CCP's netting arrangements. Without such legal underpinnings, net obligations may be challenged in judicial or administrative insolvency proceedings. If these challenges are successful, the CCP or its participants would be obligated for gross amounts – potentially a huge, even devastating, change because the gross obligations could be many multiples of the net obligations.
8. A CCP's legal framework should also support finality of settlement. A critical issue in a CCP's money settlement arrangements is the timing of the finality of funds transfers between the CCP's accounts and the accounts of its participants at the banks used to effect such settlements. The funds transfers should be final (irrevocable and unconditional) when effected (when accounts are debited and credited) also in relation to interoperable CCPs. The laws of



the relevant jurisdictions must support the provisions of the CCP's legal agreements with its settlement banks relating to finality. Similarly, there must be a clear and effective legal basis for the finality of the transfers of financial instruments.

9. Where a CCP crosses borders through linkages or interoperable arrangements, including the taking of collateral, or remote participants, the rules governing the CCP's activities should clearly indicate the law that is intended to apply to each aspect of a CCP's operations including (a) the law governing the CCP; (b) the law chosen to govern the contractual aspects of the relationship with each participant, and; (c) the law chosen to govern the proprietary aspects of securities held on a participant's account with a system and (d) the law covering collateral pledged to the CCP, **including where relevant, the conditions for rehypotheication of collateral**. Potential conflicts of laws should be identified and the CCP must address conflicts of laws issues when there is a difference in the substantive laws of the jurisdictions that have potential interests in a CCP's activities. The legal framework for a CCP must be evaluated in the relevant jurisdictions. These include those jurisdiction(s) (i) in which the CCP is established (ii) in which the CCP's direct participants are established, domiciled or have their principal office; and (iii) whose laws affect the operation of the CCP as a result of: (a) the law governing the CCP; (b) the law chosen to govern the contractual aspects of the relationship with participant; and (c), if different from (b), the law chosen to govern the proprietary aspects of securities cleared by the CCP or taken as collateral. Relevant jurisdictions may also include a jurisdiction in which a security handled by the system is issued, jurisdictions in which an intermediary, its customer or the customer's bank is established, domiciled or has its principal office; or a jurisdiction whose laws govern a contract between these parties or interoperable CCPs. In such circumstances, each jurisdiction's conflict of laws rules should specify the criteria that determine the law applicable to the activity. CCPs should take into account the conflicts of laws issues when structuring their rules and choosing the law that governs the CCPs. Both CCPs and participants also should be aware of applicable constraints on their ability to choose the law that will govern a CCP's activities. A jurisdiction ordinarily does not permit CCPs and participants to circumvent the fundamental public policy of that jurisdiction by contract.
10. A CCP and the appropriate regulatory authorities should organise and license a CCP in a manner that enables it to take advantage of all of the legal protections available in the jurisdiction. As the Settlement Finality Directive provides legislation that supports most of the legal issues listed above, CCPs whose operations are governed by the law of an EEA Member State should apply for designation under this Directive. Regardless of its organisation or regulatory status, a CCP should have the legal authority to establish requirements for direct access to its services and deny access to entities that fail those



requirements. Further, legal, regulatory or confidentiality restrictions should not prevent market participants from providing information about themselves relevant to their participation in a CCP.

11. The application of a multitude of jurisdictions to the operations of a CCP increases the legal complexity and could possibly affect systemic stability. The Settlement Finality Directive reduces these risks by providing clear rules on the law used to govern the system and the law used to govern the rights and obligations of a participant in an insolvency situation. In the same vein, the range of jurisdictions chosen in connection with a CCP's operations should be kept to a minimum. Subject to a legal risk analysis, it may prove to be advisable that only one legal system is chosen to govern the contractual aspects of the relationship between the CCP and each of its participants. Ideally, the law chosen should be identical to the law governing the system, in order to safeguard systemic finality, certainty and transparency. Linked or interoperable CCPs should identify, disclose and address any additional legal risks.

12. CCPs should, as a minimum, provide information to market participants (where appropriate and relevant, supported by an internal or external analysis or opinion) on the following subject matters: (1) the legal status of the CCP; (2) the legal regime governing the CCP and its activities for all cleared products; (3) the rules governing access to the CCP; (4) the applicable law governing the contractual relationship between the CCP and participants; (5) the office(s) where activities related to the maintenance of financial instruments accounts are being conducted; (6) the rules governing the use of collateral including - if applicable - that provided by non clearing participants; (7) the rules and applicable law for default and collateral, including the liquidation of positions and of assets pledged or transferred as collateral; (8) CCP risk management techniques, including the CCP legal position vis-à-vis clearing members and – if applicable - non clearing participants, (9) the laws governing the transfer of payments and those covering the final settlement of a transaction particularly if physical delivery occurs, also in links and interoperable CCPs (10) the extent to which collateral pledged to the CCP is protected against any third party claims (11) a general description on the above matters in case of a default or insolvency of the CCP including (but not limited to) – if applicable – details of any facilities offered to facilitate the segregation of assets provided by participants, including non clearing participants (12) the applicable law governing the contractual relationship underpinning links and interoperable CCPs. The applicable legal framework should ensure that all participants are adequately protected against custody risk, in particular including for example, insurance policies, contractual exclusion and agreed treatment regarding shortfalls of securities.

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## RECOMMENDATION 2: PARTICIPATION REQUIREMENTS

### A The recommendation

*A CCP should require participants to have sufficient financial resources and robust operational capacity to meet obligations arising from participation in the CCP. A CCP should have procedures in place to monitor that participation requirements are met on an ongoing basis. A CCP's participation requirements should be objective, publicly disclosed, and permit fair and open access. Rules and requirements that restrict access should be aimed at controlling risk.*

### B Key issues

1. To ensure timely performance by participants, a CCP should establish requirements for participation to ensure that participants have sufficient financial resources and robust operational capacity, including a sufficient level of relevant expertise, necessary legal powers and business practices.
2. A CCP should have procedures in place to monitor that participation requirements are met on an ongoing basis, either through timely access to regulatory reports filed by participants or directly if such reports are not available or do not contain the required information.
3. Participation requirements should be objective, permitting fair and open access. Denial of access should only be based on risk-related criteria or other criteria as set out in EU law and should be explained in writing. Participation requirements, including arrangements for orderly exit of participants, should be clearly stated and publicly disclosed.

### C Explanatory memorandum

1. A CCP seeks to control the risks to which it is exposed by dealing only with sound and reliable counterparties. Participation requirements established by a CCP are its primary means to ensure that participants have sufficient financial resources and robust operational capacity to meet obligations arising from participation. Requirements should be clearly stated and publicly disclosed so as to promote certainty and transparency. To avoid discriminating against classes of participants and introducing competitive distortions, participation requirements should be objective and avoid limiting competition through unnecessarily restrictive criteria, thereby permitting fair and open access within the scope of services offered by the CCP<sup>3</sup>. Restrictions on access should only be based on risk-related criteria or other criteria as set out in EU law. So, for example, restrictions on access for non-resident

<sup>3</sup> For example, a CCP offering its services only to wholesale market participants is not required to provide its services to retail market participants.

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participants are unlikely to be acceptable except when material doubts exist over whether system rules are enforceable against residents of other jurisdictions or remote access would expose a CCP to unacceptable risks which cannot reasonably be mitigated. A CCP may include other indicators of risk in its requirements, such as whether an institution is supervised, but these indicators should be related clearly to the risks the CCP is managing. Refusal could also be justified when there are doubts about the enforceability of legal powers with regard to money laundering, in case of applicants located in countries blacklisted by the Financial Action Task Force (FATF).

2. Protecting the financial market against unacceptable risk is an issue of public interest that justifies the denial of access to any applicants that do not meet the minimum requirements established by the CCP. However, access may also be denied if the technical, operational and financial resources are such that they could cause disturbances in the system, even if the scale of possible disturbance is not systemic in magnitude. Denial of access should be explained in writing. If an applicant questions the fairness of the refusal decision, the decision can be brought to third-party review. Protecting the market against biased competition means that “fair access” should signify equal access to the use of functions; it does not imply that any participant may access any system at any time at the same price.
3. To reduce the likelihood of a participant’s default and to ensure timely performance by the participant, a CCP should establish rigorous financial requirements for participation. Participants are typically required to meet minimum capital standards. Some CCPs impose more stringent capital requirements if exposures of or carried by a participant are large or if the participant is a clearing participant. Capital requirements for participation may also take account of the types of products cleared by a CCP. In addition to capital requirements, some CCPs impose standards such as a minimum credit rating or parental guarantees. **Additional risks may be introduced to the CCP by non clearing participants and more specifically by non-regulated entities (e.g. hedge funds). Consequently, even though CCPs only have direct exposures to clearing members and rely on the latter’s due diligence to address risks created by non clearing participants, CCPs should consider explicitly requiring that clearing members apply appropriate risk management tools to non clearing participants in their rules or introducing additional admission criteria. Regarding the relationship between a clearing member and a non clearing participant, the relevant supervisors may wish to investigate and address the potential risks for institutions offering services in particular for the clearing of OTC products.**
4. A CCP should establish requirements to ensure that participants have robust operational capacity, e.g. sufficient level of relevant expertise, necessary legal powers and business



practices, including appropriate procedures for managing risks, such that the participants are able to achieve timely performance of obligations owed to the CCP. The requirements should ensure that participants can process the expected volumes and values of transactions within the required time frames, including at peak times and on peak days. They should also have arrangements to effect collateral, payment, and delivery obligations to the CCP. A CCP should also ensure that its requirements are addressed through regular review of operational capacity and risk management policies by participants' senior management and by independent internal audit. Furthermore, a CCP may require its participants who are exposed to greater risks to demonstrate a higher level of operational robustness than other participants, because the operational failure of such a participant is likely to have greater market-wide impact than that of participants with less significant exposures.

5. A CCP also needs to ensure that directors and senior management of participants meet relevant fit and proper requirements, as appropriate. If participants are regulated entities, this may already have been evaluated by public authorities.

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6. A CCP should have procedures and allocate sufficient resources for effective monitoring of compliance with participation requirements on an ongoing basis<sup>4</sup>. A CCP should have the authority to receive timely and accurate information on participants' compliance with its requirements, either through access to regulatory reports filed by the participants with regulators (if permitted by law) or directly from the participants. Participants should be required to report any developments that may affect their ability to comply with participation requirements, and a CCP should be able to impose more stringent restrictions on individual participants in situations where it determines that the participant poses heightened risk. Some CCPs also have the authority to conduct on-site visits to participants. A CCP should have in place arrangements for the suspension and orderly exit of participants that no longer meet participation requirements, and those arrangements should be publicly disclosed.

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<sup>4</sup> The requirement is for a CCP to monitor compliance with its participation requirements and should not be interpreted as mandating a regulatory role for a CCP beyond those requirements the CCP imposes as a condition for participation in the CCP. Where applicable, a CCP may rely on the supervisory activities of the participant's regulators, but this does not absolve the CCP from conducting its own due diligence



## RECOMMENDATION 4: MARGIN REQUIREMENTS

### A The recommendation

*A CCP should to the greatest extent feasible impose margin requirements to limit its credit exposures to participants. These requirements should be sufficient to cover potential exposures that the CCP estimates to occur until the liquidation of the relevant positions. The models and parameters used in setting margin requirements should be risk-based and reviewed regularly.*

### B Key issues

1. Margin requirements should be imposed where feasible and should be sufficient to cover losses that result from 99 % of the price movements over an appropriate time horizon. This time horizon should be appropriate to capture and identify the risk characteristics of the specific instrument in order to allow the CCP to estimate the magnitude of the price changes to be expected to occur in the interval between the last margin collection and the time the CCP estimates it will be able to liquidate the relevant positions. Models and parameters used in determining margin requirements are based on the risk characteristics of the products cleared and take into account the interval between margin collections. The ability of the models and parameters to achieve the desired coverage should be validated regularly.
2. A CCP should have the policy, the authority and operational capacity to make intraday margin calls to mitigate credit exposures arising from new positions or from price changes.
3. The assets that a CCP accepts to meet margin requirements should be limited to highly liquid instruments.<sup>5</sup> Haircuts should be applied to asset values that reflect the potential for their value to decline over the interval between their last revaluation and the time by which they can reasonably be assumed to be liquidated.

### C Explanatory memorandum

1. CCPs should impose margin requirements to limit the build-up of credit exposures and to generate a pool of resources to cover losses in the event a participant defaults, unless the CCP can demonstrate that the calculation and collection of margins are impossible or inappropriate.

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<sup>5</sup> In special circumstances it may be appropriate for a CCP to accept less liquid assets, for example, the underlying stock might be accepted as a margin asset for an option on that stock, even though the stock might not be highly liquid



2. In setting margin requirements, a CCP should use models and parameters that capture the risk characteristics of the products cleared and that take into account the interval between margin collections. Product risk characteristics can include historic price volatility, non-linear price characteristics, and jump-to-default risks. Margins should take into account market liquidity, which can also change through the life of a transaction. The margin models and parameters should be reviewed and back tested regularly (at least quarterly) to assess the reliability of the methodology in achieving the desired coverage. During periods of market turbulence, these reviews should occur more frequently to take account of potential changes to the suitability of underlying assumptions. The margin-setting process should be approved by a CCP's senior management responsible for risk issues. CCPs should be transparent about their reliance and use of market, quotation and modelled prices for the calculation of margin requirements to the relevant authorities, and, to an appropriate extent, to their participants.
3. Margin requirements impose opportunity costs on CCP participants. So, a CCP needs to strike a balance between greater protection for itself and higher opportunity costs for its participants. For this reason, margin requirements are not designed to cover price risk in all market conditions. Nonetheless, margins should be sufficient to protect the CCP from losses that result from 99 % of the price movements over an appropriate time horizon. This time horizon should be appropriate to capture and identify the risk characteristics of the specific instrument in order to allow the CCP to estimate the magnitude of the price changes to be expected to occur in the interval between the last margin collection and the time the CCP estimates it will be able to liquidate the relevant positions.. In other words, exposures from price movements should breach margin requirements not more often than 1 percent of the time. The price estimations should be based on relevant historical data as well as forthcoming price-sensitive events that are foreseeable for the CCP. This recommendation does not prescribe how much historical data must be used for this purpose. The appropriate amount of data to use will vary from product to product and over time. If, for example, volatility rises, a CCP may want to use a short interval that better captures the new, higher volatility prevailing in its markets. In case of newly listed securities, margin parameters should be generally based on conservative assumptions over a significant number of comparable issuers/financial instruments.
4. To mitigate intraday risks, a CCP should have the authority and operational capacity to make intraday margin calls, at a minimum when pre-specified thresholds are breached (for example, when market price changes exceed pre-determined thresholds or when one or more participants build up large positions during the day). Some CCPs provide services for markets in which exposures can change dramatically within the day, either because of participants' trading activity or price volatility. In such cases, a CCP should monitor exposures intra-day

**Deleted:** (including historic price volatility, market liquidity, and whether the products exhibit non-linear price characteristics)





(recommendation 3) and limit the build up of potential losses from exposures through both routine and special intra-day margin calls.

5. In calculating margin requirements, a CCP may allow offsets or reductions in required margins between products for which it is counterparty if the price risk of one product is significantly and reliably correlated with the price risk of another. A CCP should base such offsets on an economically meaningful methodology that reflects the degree of price correlations between the products. **It should also allow for potential changes in correlations between products, particularly at times of market turbulence.**
6. Because of the role margin plays in a default, a CCP needs assurance of its value in the event of liquidation, and a CCP needs the capacity to draw upon it promptly. A CCP generally should limit the assets accepted as margin to those with high liquidity.<sup>6</sup> Margin assets should be marked to market daily. Haircuts should be applied to the market values of the assets so as to adequately reflect the potential for their value to decline over the interval between their last revaluation and the time by which they can reasonably be assumed to be liquidated; these haircut procedures should be reviewed regularly. If market prices do not fairly represent values, a CCP should have the authority to exercise discretion in valuing margin assets according to its predefined methods. If a CCP accepts assets in foreign currencies, any foreign exchange risk should also be taken into consideration. Because of potential concerns about the ability to liquidate margin assets quickly and without significant price effects, a CCP may limit the concentration of holdings of certain assets (e.g., securities issued by individual obligors).

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<sup>6</sup> In special circumstances it may be appropriate for a CCP to accept less liquid assets, for example, the underlying stock might be accepted as a margin asset for an option on that stock, even though the stock might not be highly liquid.



## RECOMMENDATION 5: OTHER RISK CONTROLS

### A The recommendation

*A CCP should maintain sufficient available financial resources to cover potential losses that exceed the losses to be covered by margin requirements. For this purpose, the CCP should develop plausible scenarios and conduct stress tests accordingly. At a minimum, a CCP should be able to withstand a default by the participant to which it has the largest exposure in extreme but plausible market conditions.*

### B Key issues

1. In addition to margin requirements, a CCP should maintain sufficient available financial resources to cover potential residual losses that exceed the losses to be covered by margin requirements. For this purpose, the CCP should develop scenarios of extreme but plausible market conditions and conduct stress tests accordingly. The market conditions evaluated should include the most volatile periods that have been experienced by the markets for which a CCP provides its services. While the recommendation focuses on a default by the participant to which a CCP has the largest exposure in a specific scenario, the potential for defaults by two or more participants should be evaluated (particularly related group members or affiliates). Stress tests to check the adequacy of resources in the event of a default in extreme market conditions should be performed monthly, or more frequently when markets are unusually volatile, become less liquid, or when the size or concentration of positions held by a CCP's participants increases significantly. In addition, comprehensive stress tests, involving a full validation of models, parameters and assumptions and reconsideration of appropriate stress scenarios should be conducted at least annually. The stress testing assumptions that a CCP uses in reaching a judgment about the adequacy of its resources should be disclosed to participants and authorities. A CCP should have a clear policy on the actions it would take in the event tests indicate resources are not likely to be adequate; either its exposure should be reduced or its resources should be enhanced. The policy should be made available to its participants and authorities.
2. Although a CCP's financial resources can take a variety of forms, for purposes of assessing observance of this recommendation, resources should be counted only if there is a high degree of assurance that a CCP can draw on them for the anticipated value and a CCP's rules do not permit them to be used to cover its normal operating losses or losses from other activities in which it is engaged.
3. If any of the resources that are being relied upon are not immediately available to a CCP, it should obtain credit lines that are committed and subject only to presentment in order that it



can borrow against those assets to meet its liquidity needs. The CCP's rules should ensure that the resources posted by a defaulter are used prior to other financial resources in covering losses.

## **C Explanatory memorandum**

1. Although risk management tools (notably a CCP's participation requirements) are designed to ensure that defaults are unlikely, a CCP must nonetheless plan for the possibility that a default occurs. In that event, a CCP has an obligation to continue to make payments to non-defaulting participants on time. It must maintain financial resources both to provide it with liquidity to make timely payments in the short term and to enable it to cover the losses that result from defaults. In addition to margin requirements to cover losses from price movements that the CCP estimates to occur on the basis of historical data and other foreseeable price-sensitive events, the CCP should maintain further financial resources (e.g. resources of a default fund to which all the participants have contributed as well as the CCP's own capital) to cover potential residual losses that exceed the estimated/expected losses. For this purpose, the CCP should develop plausible scenarios and conduct stress tests accordingly.
2. Assessing the adequacy of resources can be difficult because it depends on the scenario that the CCPs focuses on, i.e. it rests on assumptions about which participant or participants default and about market conditions at the time of the default. Many CCPs focus on a default by the participant to which the CCP has the largest exposure in the market scenarios under consideration.<sup>7</sup> Linked CCPs that have been assessed against recommendation 11 are not to be considered when identifying the largest residual exposure. The evaluation of the largest potential exposure should also take into account risks which may arise from the participant's further relation to the CCP, e.g. as intermediary, settlement bank, issuer of collateral, or guarantor. This should be viewed as a minimum recommendation in a CCP's evaluation of its resources. However, market conditions that typically accompany a default put pressures on other participants (particularly related group members or affiliates), and a default itself tends to heighten market volatility, further contributing to stresses. Planning by a CCP should consider the potential for two or more participants to default in a short time frame, resulting in a combined exposure greater than the single largest exposure.

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<sup>7</sup> This recommendation focuses on the largest potential exposure of a CCP, regardless of whether that exposure arises in a participant's account or in the account of a participant's customer. In assessing the adequacy of resources, however, an individual CCP's analysis will need to take into account the source of the default if that affects the financial resources available to cover losses.



3. Stress testing is used by CCPs to assess the adequacy of their financial resources.<sup>8</sup> A CCP assumes extreme market conditions (that is, price changes significantly larger than the normally prevailing levels of volatility), and evaluates the potential losses in individual participants' positions. Stress testing provides insights into several aspects of the financial resources the CCP may need. The largest debit from such a test helps a CCP evaluate its potential liquidity needs. Calculations taking into account the resources of the potential defaulter that are available to a CCP (margins, clearing fund contributions or other assets) provide perspective on the potential size of the losses that a CCP might face. Other stress tests may consider the distribution of positions between the participant and its customers in evaluating potential losses.
4. The relevant stress tests will differ from one CCP to another and, for a given CCP, over time. Typically, a CCP will conduct a range of stress tests. These tests should reflect a CCP's product mix and other risk management choices. Key elements of stress testing are the market conditions and default scenarios assumed and the frequency with which the tests are conducted. A CCP must make judgments about what constitutes "extreme but plausible" market conditions. The conditions evaluated should include the most volatile periods that have been experienced by the markets for which a CCP provides its services. A CCP also should evaluate the losses that would result if levels of volatility observed in related products were also experienced in its products (this is particularly relevant when a CCP begins clearing a new product) and if the usual patterns of correlations in prices among its products changed. CCPs conduct multiple types of stress tests. Tests to check the adequacy of resources in the event of a default in extreme market conditions should be performed monthly, and more frequently when markets are unusually volatile or less liquid or when the size or concentrations of positions held by its participants increase significantly. In addition, comprehensive stress tests involving a full validation of model parameters and assumptions and reconsideration of appropriate stress scenarios should be conducted at least annually.<sup>9</sup>
5. Based upon the stress testing process, a CCP must reach a judgment about the adequacy of its resources. A CCP should provide its participants and authorities specific information about its assumptions related to the number and size of participants that default and the market conditions at the time of default in coming to this judgment. A CCP should have clear policies for the actions it would take if stress testing indicates that its resources are not likely to be

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<sup>8</sup> Stress testing also is conducted to help a CCP understand the risks it is assuming and potential ways to mitigate those risks.

<sup>9</sup> CCPs conduct different types of stress tests, some of which are conducted weekly or even daily. Such stress tests often are mechanical, evaluating positions at higher confidence intervals for price movements, for example. This requirement for conducting monthly and comprehensive annual stress tests is considerably more demanding than these routine risk management activities.



adequate either for meeting liquidity demands or for covering an exposure resulting from default. The actions that a CCP might take will vary, but the ultimate effect must be either to reduce the potential exposure of the CCP or to increase the resources of the CCP. These policies should be made available to a CCP's participants and its authorities.

6. The financial resources available to a CCP can take a variety of forms. For many CCPs, some assets that they require participants to post can only be used to cover losses arising from that participant's default.<sup>10</sup> Other financial resources are available to cover losses arising from any participant's default. Many CCPs require participants to post assets in a clearing fund that can be used in the event of a default by any participant.<sup>11</sup> CCPs generally have their own capital and retained earnings from operations. Resources can include contingent claims on non-defaulting participants, parent organisations, or insurers. For example, a CCP's rules may require non-defaulting participants to provide additional funds to it in the event of default. The parents of some CCPs provide a guarantee, and other CCPs obtain default insurance that covers a certain amount of losses after a deductible has been met. Resources posted by a defaulter should be used prior to other financial resources in covering losses.
7. The availability of these financial resources and their liquidity vary. When margin is held, it should be readily available and liquid (recommendation 4). A CCP's clearing funds, own capital, or retained earnings are under its immediate control, but they generally are invested and may not be immediately available. Insurance contracts, parental guarantees or rights to call for funds from non-defaulting participants are often available only after specific conditions are met. In assessing the adequacy of its financial resources, a CCP should consider the availability and liquidity of the assets it holds, as well as possible concentration risk.
8. A CCP should include only those resources that it can reliably draw on in the event of a default in evaluating the adequacy of its resources. For example, possible payouts from insurance contracts should be counted only if there is high degree of certainty that the terms of the contracts would be payable in the event of a default. The precise circumstances under which a CCP can draw upon any resources that require conditions to be met should be carefully evaluated in judging their contribution to the overall adequacy of resources.
9. Even if there is assurance that a CCP can draw on resources in a default, some types of financial resources are subject to potential losses in value. Haircuts should be applied to these

<sup>10</sup> Some CCPs also enter into cross-margining agreements that enable a CCP to access a defaulting participant's assets at another CCP in certain circumstances.

<sup>11</sup> See section 3 for a discussion of the differing terminology with respect to financial resources used by CCPs.



resources to reflect potential volatility in their market values resulting from price, credit and liquidity risk. Only the value subject to the appropriate haircuts should be counted as part of the financial resources of a CCP.

10. Rules of a CCP should expressly set out the **structure of resources, the situations in which specific resources can be used and the order that those resources would be applied to a default.** For purposes of assessing observance of this recommendation, financial resources should be counted only if a CCP's rules do not permit them to be used to cover its normal operating losses or to cover losses from other activities in which it is engaged. Nevertheless, a CCP should have sufficient resources to cover also such losses. If a CCP serves multiple markets (either in the same jurisdiction or multiple jurisdictions), the CCP's ability to use resources supplied by participants in one market to cover losses from a default in another market should be clear to all participants. (A CCP's design of its stress tests also should take into account the extent to which resources are pooled across markets.) **When a CCP extends its activity to a new type of product(s) (e.g. OTC products) compared with the other cleared products, the CCP should contemplate the possibility to implement dedicated resources (e.g. like a dedicated clearing fund) in order to mitigate potential spill-over effects, and if relevant, clearly justify the rationale for using the existing arrangements of resources available to cover other markets.**
11. Because a function of the financial resources of a CCP is to enable it to face immediate liquidity demands, a CCP should obtain credit lines that allow it to borrow against resources that are not immediately available. These credit lines should be committed and subject only to presentment.<sup>12</sup> The presence of such credit lines is an important consideration in assessing the adequacy of a CCP's resources from a liquidity perspective.
12. A CCP which has a default fund must have a clear and transparent method for determining participants' contributions to its financial resources that reinforces incentives for participants to manage the risk that they pose for the CCP. Generally such incentives involve a system in which contributions are linked to the riskiness of participants' activity as measured by margin posted, by size of positions or sometimes by stress-testing results. A CCP also should establish rules that address replenishing resources following a default. These rules typically set out responsibilities and expected contributions before a participant can cease participation.

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<sup>12</sup> The credit lines should not contain material adverse change clauses.



## RECOMMENDATION 6: DEFAULT PROCEDURES

### A The recommendation

*A CCP's default procedures should be clearly stated, and they should ensure that the CCP can take timely action to contain losses and liquidity pressures and to continue meeting its obligations. Key aspects of the default procedures should be publicly available and tested regularly.*

### B Key issues

1. A CCP's default procedures should clearly state what constitutes a default and permit a CCP to promptly close out or effectively manage a defaulting participant's positions and to apply collateral or other resources. There should be clear procedures, or mechanisms other than those of the CCP, for handling customers' positions and margin. Default procedures should also permit a CCP to utilise promptly any financial resources that it maintains for covering losses and liquidity pressures resulting from the defaults.
2. The legal framework applicable to a CCP should provide a high degree of assurance that its default procedures are enforceable, despite the insolvency of a participant. The national insolvency law should permit the identification and separate treatment of customer and proprietary assets.
3. A CCP should analyse the effect which its default procedure may have on the market. A CCP's management should be well prepared to implement its default procedures in a flexible manner, and management should have internal plans for such an event, including communication with the operator of the market the CCP serves if that operator is a separate entity. The plans should be reviewed at least once a year and tested regularly.
4. Key aspects of the default procedures should be publicly available.

### C Explanatory memorandum

1. The purpose of default procedures is to protect the continuing functioning of a CCP by limiting the potential for the effects of a default to spread beyond the defaulting participant. Key objectives of default procedures include minimising further losses at the defaulting participant, winding down its positions in an orderly way, and enabling a CCP to continue performing its obligations. To the extent consistent with these key objectives, a CCP should seek to preserve other participants' ability to manage their portfolios.



2. A priority, of course, should be to avoid defaults. As noted above, a CCP's participation requirements should include financial requirements that reduce the likelihood of defaults. Furthermore, a CCP should identify situations that it determines may pose a threat of default and develop early warning pre-default plans and procedures, such as increasing monitoring or imposing restrictions on a participant. These procedures should provide an incentive to participants for early notification of potential financial, liquidity or systems problems that could lead to a default.
3. A CCP's default procedures should clearly define an event of default and the method for identifying a default. As part of the default procedure, the CCP should consider the cause of the default and whether it may be associated with financial difficulties of the defaulting participant. The procedures should specify whether the default event is automatic or whether a specific decision must be taken to declare the default, and who is authorised to make such decisions. The procedures should set out broadly the measures a CCP can take when a default is declared; the extent to which the actions are automatic or whether a decision is necessary; changes to normal settlement practices; how contracts in the process of delivery will be handled; the expected treatment of the proprietary account, and of the customers' accounts; the probable sequencing of actions; the information that will be needed; the roles, obligations and responsibilities of the various parties (such as clearing participants, authorities, any exchanges and the CCP itself); and the existence of mechanisms other than those of the CCP itself that may be activated to contain the impact of a default. **As regards credit derivatives, a CCP's default procedures should provide for adequate mechanisms.**
4. In the event of default, a CCP should have arrangements or mechanisms to facilitate close out, hedging or the transfer of a defaulting participant's proprietary positions promptly. The longer these positions remain open, the larger are the potential credit exposures from them. A CCP should have the ability to apply the proceeds of liquidation, as well as all other funds and assets of the defaulting participant, to meet the defaulting participant's obligations to it. Typically a CCP will attempt to liquidate positions quickly, but in some instances a CCP may determine that its exposure would be minimised by hedging positions and managing the liquidation over time. What is critical is that a CCP has the authority to act promptly in the manner it thinks best to contain its exposure and to mitigate overall market effects.
5. The default procedures or mechanisms other than those of a CCP should provide for the handling of positions and collateral (including margin) of customers of the defaulting participant. **In doing so, a CCP should endeavour to transfer customer positions and collateral (if provided to the CCP) should the customer agree, provided that the safety of the CCP and its Clearing Members is not compromised.** The rules should identify the circumstances under





which positions may be liquidated or transferred, which positions are eligible for liquidation or transfer, who may exercise this authority, and what are the applicable time frames within which actions would be taken. At a minimum, a liquidation of positions or application of previously posted collateral should not be prevented, stayed or reversed.

6. A CCP's procedures should permit it to use promptly any financial resources that it maintains for covering losses and liquidity pressures resulting from defaults, including use of liquidity facilities. The rules of a CCP should specify the order in which different types of resources will be used. This information enables participants to assess their potential exposures from using a CCP's services. Typically, a CCP will look first to assets posted by the defaulting participant to provide incentives for participants to manage prudently the risks they pose for a CCP.
7. Relevant national law should provide certainty that actions taken by a CCP as part of its default procedures are enforceable and that actions taken under such procedures may not later be stayed, avoided, or reversed (see recommendation 1). To facilitate the transfer or liquidation of positions and assets, national insolvency law should permit the identification and separate treatment of customer and proprietary assets.
8. A CCP's management should be well prepared and have sufficient discretion to implement default procedures in a flexible manner. The exercise of this discretion needs to be subject to appropriate arrangements to minimise any conflicts of interest issues that may arise. Management should have internal plans that clearly delineate the roles and responsibilities for addressing a default, and provide guidance to its staff on how the default procedures should be implemented, in particular for promptly closing out or hedging a defaulting participant's contracts and for closing out or transferring customers' contracts, for liquidating a defaulting participant's collateral and other assets (such as any contributions to a clearing fund) and for drawing on financial resources other than margin. As preparation for implementing the default procedure, a CCP should analyse the effect different options for handling a participant's default could have on the market, for example possible effects on prices of its liquidating collateral. Management must also ensure that it has the operational capabilities needed to implement its default procedures in a timely manner. The internal plan should also address documentation, the CCP's information needs and coordination when more than one CCP or authority is involved. Timely communication with regulators, exchanges that use the CCP, other affected CCPs and payment and settlement systems are of critical importance. The CCP, to the extent permitted, should clearly convey information which helps those affected manage their own risks. The internal plan should be reviewed at least once a year and should be tested regularly.



9. To provide certainty and predictability to all market participants about the measures that may be taken by a CCP and other relevant entities in the event of a default, a CCP should make available key aspects of its default procedures: (i) the circumstances in which action may be taken, (ii) who may take those actions, (iii) the scope of the actions which may be taken, including the treatment of both proprietary and customer positions, funds and assets, (iv) the mechanisms to address a CCP's obligations to non-defaulting participants, and (v) the mechanisms to address the defaulting participant's obligations to its customers.<sup>13</sup> This transparency helps the orderly handling of defaults, enables non-defaulting participants to understand their obligations to a CCP and to their customers, and gives market participants the information they need to make an informed assessment about whether to trade in a given market and how best to structure their customer account agreements. The widespread availability and understanding of default procedures may also help to foster confidence in the market should a major default occur and help to sustain market liquidity by avoiding or minimising withdrawals by other market participants.

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<sup>13</sup> For more details on the key aspects under each of the headings, see *Report on Cooperation between Market Authorities and Default Procedures* (IOSCO 1996).



## RECOMMENDATION 7: CUSTODY AND INVESTMENT RISKS

### A The recommendation

*A CCP should hold assets in a manner whereby risk of loss or of delay in its access to them is minimised. Assets invested by a CCP should be held in instruments with minimal credit, market and liquidity risks.*

### B Key issues

1. As described in the relevant ESCB-CESR Recommendations for Securities Clearing and Settlement in the European Union or for institutions which are not incorporated in the European Union in the CPSS-IOSCO Recommendations for Securities Settlement Systems, a CCP should hold securities in custody at entities that employ accounting practices, safekeeping procedures, internal and external controls, insurance, and other compensation schemes that fully protect these securities; the legal framework also should be such that the securities are protected against the claims of a custodian's creditors. A CCP should have prompt access to securities when required. A CCP should monitor its custodians' financial condition, safeguarding procedures and operational capacity on an ongoing basis.
2. Investments should be secured or they should be claims on high quality obligors. Investments should be capable of being liquidated quickly with little if any adverse price effect. A CCP should be prohibited from investing its capital or cash margins that the CCP intends to use for risk management purposes in its own securities or those of its parent company.
3. In making investment decisions, a CCP should take into account its overall credit risk exposures to individual obligors, whether from cash investments or other relationships, and ensure that its overall credit risk exposure to any individual obligor remains within acceptable concentration limits.

### C Explanatory memorandum

1. A CCP has the responsibility of safeguarding assets that secure participants' obligations to it. These assets can be cash or securities, and they must be held in such a manner that their timely availability is assured if a CCP needs to draw on them. Further, assets that are invested must be placed in instruments with minimal credit, market and liquidity risks so that a CCP knows the amount of resources at its disposal and can realise that value promptly.
2. If a participant has posted securities as margin, a CCP needs a custodian, which may be a central securities depository (CSD) or a financial institution, to hold those securities. Any



institution providing custodial services should employ procedures that protect the securities. For CSDs, which are incorporated in the European Union, this means that they meet the recommendations in volume 1 of this report. Those entities providing custodial services which are not incorporated in the European Union should employ procedures that protect the securities as described in Recommendation 12 of the CPSS-IOSCO Recommendations for Securities Settlement Systems. In this regard, a CCP should ascertain that its custodian's accounting practices, safekeeping procedures, and internal and external controls protect the securities against the custodian's insolvency, negligence, **rehypothecation**, misuse of assets, fraud, poor administration, or inadequate record keeping. Of particular concern is that assets held in custody be protected against claims of a custodian's creditors. Generally, this is accomplished through a legal framework supporting segregation of customer assets and through supervisory enforcement of effective segregation. Failures in any of these areas could jeopardise a CCP's ability to retrieve the securities promptly. The custodian must also have a strong financial position to be able to sustain losses from operational problems or non-custodial activities. A CCP must confirm that its interest in the securities can be enforced and that it can have prompt access to the securities when required; such issues are particularly challenging when securities are held at custodians in different time zones or jurisdictions. A CCP should monitor the financial condition, safeguarding procedures and the operational capacity of its custodians on an ongoing basis. In meeting the requirements of this paragraph, a CCP may rely where reasonable and prudent on the relevant regulatory frameworks for the custodians and CSDs it chooses to use.

3. A CCP's investment strategy should be consistent with its overall risk management strategy. In some instances, a CCP may invest cash that participants have posted. Also, it must make decisions about investing its own resources. A CCP has the responsibility to ensure that such investments do not compromise its ability to use the funds for their intended purpose. Cash posted by a participant represents a resource a CCP may need to call upon in the event of a default. Similarly, some CCPs may plan to use their own resources as means for covering losses exceeding a defaulting participant's resources. If a CCP intends for its own resources to be used to cover losses and liquidity pressures from a default, its investment of those resources should comply with this recommendation so that the resources are readily available if it needs to draw on them. (Some CCP resources will be invested in physical assets such as computers and buildings, which are not the subject of this recommendation.) Investments should be secured or they should be claims on high quality obligors to mitigate the credit risk to which a CCP is exposed. Because the value of these investments may need to be realised quickly, they should be of a type that would enable a CCP to liquidate them with little if any adverse price effect. Investments in illiquid or volatile instruments are not appropriate. The CCP should consider how its choice of issuer and maturities of financial instruments will



affect its ability to liquidate its portfolio quickly. Investments of the CCP's capital or of cash margins that the CCP intends to use for risk management purposes in the CCP's own securities or those of its parent company should be prohibited. Furthermore, some CCPs use cash margins to meet their liquidity needs stemming from their participation in SSSs that do not offer simultaneous DVP and RVP (typically SSSs working on an RTGS basis). When this is the case, a CCP should settle limits to this use of cash margins.

4. Often a CCP has several types of relationship with major financial institutions. For example, an institution might offer a CCP settlement bank services, custodial services, and a liquidity facility; it might be a participant itself, offer clearing services to other participants, as well as being a place where a CCP deposits cash. A CCP should carefully consider its multiple relationships with institutions in evaluating its exposure to obligors. In making investments, a CCP should take into account its overall credit risk exposures to individual obligors, whether from cash investments or other relationships, and ensure that its overall credit risk exposure to any individual obligor remains within acceptable concentration limits.



## RECOMMENDATION 8: OPERATIONAL RISK

### A The recommendation

*A CCP should identify sources of operational risk, monitor and regularly assess them. The CCP should minimise these risks through the development of appropriate systems, , and effective controls and procedures. Systems and related functions should be (i) reliable and secure, (ii) based on sound technical solutions, (iii) developed and maintained in accordance with proven procedures and (iv) have adequate, scalable capacity. The CCP should have appropriate business continuity and disaster recovery plans that allow for timely recovery of operations and fulfilment of a CCP's obligations. Systems should be subject to frequent and independent audits.*

### B Key issues

1. A CCP should actively identify, monitor, assess and minimise sources of operational risk and should establish clear policies and procedures to address those risks, including risks from those operations that are outsourced to third parties, or from its other activities.
2. Operational risk policies and procedures should be clearly defined, frequently reassessed and updated and tested to remain current. The responsibilities of the relevant governance bodies and senior management should be clearly established. There should be adequate management controls and sufficient (and sufficiently well-qualified) personnel to ensure that procedures are implemented accordingly. Information systems should be subject to periodic independent auditing.
3. A CCP should have a business continuity and disaster recovery plan that addresses events posing a significant risk of disrupting operations including its reliance on third parties and the plan should allow for timely resumption of critical operations. This means that the CCP can meet its obligations on time. Contingency plans should, as a minimum, provide for the recovery of all transactions at the time of the disruption to allow systems to continue to operate with certainty. A second site should be set-up in order to meet these obligations. Business continuity and disaster recovery plans should be regularly reviewed, tested on a regular basis and after modifications to the system and tested with participants. Appropriate adjustments should be made to plans based on the results of such exercises. Adequate crisis management structures, including formal procedures, alternative means of communication and contact lists (both at local and cross-border level) should be available.
4. All key systems should be reliable, secure, and able to handle volume under stress conditions.



5. CCPs should only outsource settlement operations or functions to third parties after the approval of the relevant competent authorities, if it is required by regulation. If it is not required, they should at least notify in advance the relevant competent authorities, and should ensure that the external providers meet the relevant recommendations. The relevant outsourcing entities should have the power to require adaptation of the outsourcing measures.

### **C Explanatory memorandum**

1. Operational risk is the risk that deficiencies in information systems or internal controls, human errors, management failures, or disruptions from external events such as natural disasters result in unexpected losses. The importance of operational risk lies in its capacity to impede the effectiveness of measures adopted to address other risks and to cause participants to incur unforeseen losses, which, if sizeable, could have systemic implications. Operational failures can also lead to legal liability, reputation loss and business loss.
2. Sources of operational risk to a CCP include inadequate control of systems and processes; inadequate management more generally (lack of expertise, poor supervision or training, inadequate resources); inadequate identification or understanding of risks and the controls and procedures needed to limit and manage them; and inadequate attention to compliance procedures. External events of terrorism or health crises, as well as natural disasters, also are sources of operational risk that a CCP must manage.
3. Potential operational failures include errors or delays in message handling, transaction processing, system deficiencies or interruption, fraudulent activities by staff and disclosure of confidential information. Errors or delays in transaction processing may result from miscommunication, incomplete or inaccurate information or documentation, failure to follow instructions or errors in transmitting information. These problems are particularly common in manual processes, but automation brings its own risks of system deficiencies, interruptions and computer crime that may arise from factors such as inadequate security, capacity, testing of software or resilience of backup systems.
4. To minimise operational risk, CCPs should actively identify and analyse sources of risk, whether arising from the arrangements of the CCP itself, from those of its participants, or from external factors, **including trading and settlement arrangements, as well as data warehouses**, and establish clear policies and procedures to address those risks. Sound internal controls are essential to a CCP's management of operational risk. There should be adequate management controls and sufficient (and sufficiently well qualified) personnel to ensure that procedures are implemented appropriately. Operational policies and procedures should be



frequently updated and tested to ensure that they remain current. These policies and procedures should be reassessed periodically (at least annually or whenever significant changes occur to the system or related functions). The relevant governance body should be informed of the results of the review and approve any follow-up work. Senior management should have the responsibility for implementing changes to the risk strategy approved by the relevant governance body. The relevant governance body generally refers to the Board of Directors, however this may differ in some countries. Operational risk policies and procedures should be made available to the relevant public authorities.

5. The institution should also have in place accurate and clear information flows within its organisation in order to establish and maintain an effective operational risk management framework and to foster a consistent operational risk management culture across the institution. Furthermore, adequate crisis management structures, including formal procedures to manage crises, alternative means of communication and contact lists (both at local and cross-border level) should be defined in advance and be available in order to deal efficiently and promptly with operational failure that may have local or cross-border systemic consequences.
6. Information systems and other related functions should be subject to internal audit by qualified information systems auditors, and external audits should be seriously considered. Audit results should be reported to the relevant governance body. The audit reports (both internal and external) should also be made available to regulators and overseers upon request. The supervisor and overseers should also conduct regular independent evaluations of the institution's strategies, policies, procedures and processes related to operational risk.
7. All key systems should be secure (that is, have access controls, be equipped with adequate safeguards to prevent external and/or internal intrusions and misuse, preserve data integrity and provide audit trails). They should be reliable, scalable and able to handle volume under stress conditions. CCPs are dependent on electronic communications and need to ensure the integrity of messages by using reliable networks and procedures (such as cryptographic techniques) to transmit data accurately, promptly and without material interruption. The reliability of these networks is a key element to consider when assessing operational risks. Core Principle VII of the Core Principles for Systemically Important Payment Systems provides more details on operational issues.<sup>14</sup>

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<sup>14</sup> See CPSS, *Core Principles for Systemically Important Payment Systems* (BIS, 2001).





8. Before a CCP embarks on other activities that are not directly related to its CCP functions, for example developing software, processing transactions for which it is not counterparty or operating a trading system, it should be satisfied that these activities do not divert resources required to support its CCP functions. Where such a concern exists for current operations, it should either reduce its activities or increase its resources to a level that supports all of its activities adequately.
9. A CCP should have a business continuity and disaster recovery plan that addresses events posing a significant risk of disrupting operations. Responsibility for business continuity planning within the CCP should be explicit, adequate resources should be devoted to this planning, and the commitment to planning should come from the highest levels of management. Business continuity and disaster recovery plans should have clearly stated objectives, policies, and procedures that allow for rapid recovery and timely resumption of critical operations and that allow a CCP to continue to monitor the risks of its participants. Business continuity and disaster recovery plans should be audited by independent auditors regularly.
10. Ideally, backup systems should commence processing immediately. While it may be possible to recommence operations following a system disruption with some data loss, contingency plans should, as a minimum, provide for the recovery of all transactions at the time of the disruption to allow systems to continue to operate with certainty. At a minimum, the recovery of operations and data should occur in a manner and time period that enables a CCP to meet its obligations on time. In particular, CCPs should define clear targets in terms of operational robustness and business continuity, for example through the implementation of Service Level Agreements (SLA). Critical functions should be identified and processes within those functions categorised according to their criticality. Any assumption behind the categorisation should be fully documented, and reviewed regularly. If any critical functions are dependent on outsourcing arrangements, there agreements should ensure adequate service provision by third parties. Business continuity and disaster recovery plans should be regularly reviewed and tested with participants and appropriate adjustments should be made to plans based on the results of such exercises and of any operational failures which may have occurred.
11. In order to fulfil their obligations, CCPs should have business continuity and disaster recovery plans including an evaluation of their reliance on third parties. All reasonable measures should be undertaken to resume business under plausible scenarios no later than two hours after the occurrence of a disruption. In order to meet these obligations, a second site should be established having the requisite level of key resources, capabilities and functionalities, including appropriately skilled and experienced staff.



12. When a second processing site is established, data processing should be switched to the second site, ideally instantly, in the event of disruption. The back-up site should therefore provide a level of efficiency comparable to the level provided by the primary site. The second site should be located at an appropriate geographical distance and be protected from any events potentially affecting the primary site. The operator of the systems should minimise the reliance on relocating key staff and where some reliance is unavoidable, operator should anticipate how relocation would be achieved. The continuation of the activity on the second site within a short period of time, in principle less than two hours, generally requires data to be transmitted to and updated at the second site continuously, preferably in real time. The secondary site should be capable to ensure business continuity to all participants in the event that the primary site is rendered unusable for a longer period of time (e.g. days and weeks).
13. CCPs should communicate as much information to market participants as is possible without increasing the risk of unwanted events or attacks. This will enable them to assess the operational risks to which they in turn are exposed. The operational failure of a system in one market may directly affect another market if the size of cross-border clearing activities is substantial. The regulators and overseers of such important providers of clearing services should encourage these providers to set up a plan for industry-wide contingency planning ensuring co-ordination between such institutions.
14. In principle, CCPs should carry out the different functions on their own behalf. However, outsourcing is permitted within the limits outlined hereafter. CCPs should only outsource their actual clearing operations after having obtained prior approval from the relevant competent authorities, if required under the applicable regulatory regime. If not so required, CCPs should at least inform the relevant competent authorities when outsourcing such operations or functions. In such instances a contractual relationship should be in place between the outsourcing entity and the external provider that allows the relevant competent authorities to have full access to any information they deem necessary. The outsourcing entity should remain fully answerable to the relevant competent authorities, as required according to national law. The outsourcing should be made known to the participants in the outsourcing entity. Further outsourcing must be duly authorised by the CCP and notified or approved by the relevant competent authorities, according to the national requirements.
15. If any critical functions are dependent on outsourcing arrangements, operational failures by the outside service providers can create operational risk for a CCP. Clear lines of communication should be established between the outsourcing entity and the external provider to facilitate the flow of functions and information between parties both in ordinary and exceptional circumstances. CCPs that outsource operations should ensure that those



operations meet the same recommendations as if they were provided directly. In so doing, a CCP should have the information and controls to ensure that it can meet the elements of this requirement. Further, a CCP should evaluate its vulnerability arising from reliance on one or a small number of outside providers for utility and similar services. If such a service provider stops operating, a CCP's ability to operate could be compromised, possibly causing uncertainty in financial markets if it occurred with little or no warning. A CCP should seek to achieve diversity in key systems such as electricity and telecommunications to the extent possible or make back up arrangements.



## RECOMMENDATION 14: TRANSPARENCY

### A The recommendation

*A CCP should provide market participants with sufficient information for them to identify and evaluate accurately the risks and costs associated with using its services.*

### B Key issues

1. A CCP should provide market participants with sufficient information to evaluate the risks and costs of using its services. The information should include the main statistics and, where relevant, the balance sheet of the system's operator. A CCP should publicly and clearly disclose its risk exposure policy and risk management methodology.
2. Information should be accessible, at least through the internet. Information should be available in a language commonly used in financial markets as well as in at least one of the domestic languages<sup>15</sup>.
3. The accuracy and completeness of disclosures should be reviewed periodically by a CCP and at least once a year or when major changes occur.

### C Explanatory memorandum

1. Informed market participants are able to identify and evaluate the risks and costs to which they are exposed as a result of participation in a CCP, and therefore, can take actions to manage their risks and costs. Providing information on prices/fees of services offered can promote competition between service providers and may lead to lowered costs and improved levels of service. Therefore, CCPs should offer services at transparent prices that allow users to compare prices easily. To this end, specific services and functions should be priced separately to allow users the option of selecting the services and functions that they wish to use. A CCP should disclose to market participants its rules, regulations, relevant laws, governance procedures, risks, steps taken to mitigate risks, the rights and obligations of participants and the costs of using its services. The information should include the main statistics and, where relevant, the balance sheet of the CCP. *In addition, a CCP may be in a position to contribute to asset segregation by providing separated accounts and margining*

<sup>15</sup> If required in the respective domestic market.



(and collateral). In this case, the CCP should clearly describe the level segregation it can offer and the consequences thereof (e.g. the approach to margining). A CCP should make clear when and in what circumstances it assumes counterparty exposure and any restriction or limitations on its fulfilment of its obligations. A CCP should also disclose appropriate quantitative information on its clearing, netting, settlement activities and risk management performance. Types of information that are particularly useful in assessing the risks and costs of participating in a CCP include the coverage realised by margin requirements, the “extreme but plausible” market conditions used in evaluating the adequacy of financial resources, the source of prices and models used in margin calculations, and other stress testing information.<sup>16</sup> The effort by a CCP to improve transparency fosters confidence of market participants in its safety and efficiency. The information should be publicly available and clear enough for market participants to understand the steps to be taken by a CCP and other relevant entities in the event of a default. A CCP should publicly and clearly disclose its risk exposure policy and risk management methodology.

2. Information should be readily accessible, at least through the internet. It should also be current, accurate and available in a language commonly used in financial markets as well as in at least one of the domestic languages<sup>17</sup>.
3. The accuracy and completeness of disclosures should be reviewed periodically by a CCP and at least once a year or when major changes occur.

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<sup>16</sup> In disclosing stress test information, care must be taken to avoid revealing information regarding the positions of individual participants.

<sup>17</sup> If required in the respective domestic market.



## RECOMMENDATION 15: REGULATION, SUPERVISION AND OVERSIGHT

### A The recommendation

*A CCP should be subject to transparent, effective and consistent regulation, supervision and oversight. In both a national and a cross borders context, central banks and securities regulators should cooperate with each other and with other relevant authorities regarding the CCP. Such cooperation should also ensure a consistent implementation of the recommendations.*

### B Key issues

1. The CCP should be subject to transparent, effective and consistent regulation, supervision and oversight. Securities regulators (including, in this context, banking supervisors where they have similar responsibilities and regulatory authority for CCPs) and central banks should have the ability and the resources to carry out their regulation, supervision and oversight responsibilities effectively.
2. Securities regulators and central banks should clearly define and publicly disclose their objectives, their roles and key aspects of major policies for CCPs.
3. To ensure transparent, consistent and effective regulation, supervision and oversight, different forms of cooperation amongst relevant authorities may be required: day to day cooperation of relevant authorities of a CCP, both in national and cross-border context, and the cooperation of central banks and regulators to ensure the consistent implementation of the recommendation and to achieve a level playing field for CCPs in the European Union.
4. To enable them to carry out their activities, securities regulators and central banks should require CCPs to provide information necessary for regulation, supervision and oversight in a timely manner, including information on operations that have been outsourced to third parties or where the CCP proposes to undertake new activities.
5. Securities regulators, central banks and other relevant authorities should cooperate with one another, both nationally and in a cross border context, to achieve the safe and efficient operation of CCPs and links between CCPs.

### C Explanatory memorandum

1. Securities regulators (including, in this context, banking supervisors where they have similar responsibilities and regulatory authority for CCPs) and central banks share the objective of



enhancing the safety, soundness and efficiency of CCPs. The division of responsibilities for regulation and oversight of CCPs among relevant authorities varies from country to country depending on the legal and institutional framework.

2. Securities regulators and central banks will ensure the consistent application of these recommendations and to achieve a level playing field for CCPs and securities settlement systems in the European Union.
3. While the primary responsibility for ensuring the safe, sound and efficient operation of the CCP lies with its designers, owners and operators, the relevant authorities will review on the basis of regulation, supervision and oversight that the designers, owners and operators fulfil their responsibilities.
4. The objectives, responsibilities as well as the roles and major policies of the relevant authorities should be clearly defined and publicly disclosed, so that designers, owners, operators and participants of a CCP are able to operate in a predictable environment and to act in a manner that is consistent with those policies and these recommendations. The relevant authorities should clearly define and publicly disclose their supervisory roles towards the CCP participants.
5. Securities regulators and central banks should have the ability and the resources to carry out their regulation and oversight responsibilities effectively. Regulation and oversight should have a sound basis, which may or may not be based on statute, depending on a country's legal and institutional framework. The relevant authorities should have adequate resources to carry out their regulatory and oversight functions, such as gathering information on a CCP, including information on activities of participants in a CCP, assessing its operation and design, acting to promote its observance of the recommendations and conducting on-site visits or inspections if necessary.
6. To enable them to carry out their activities, securities regulators and central banks should require CCPs to provide them with the information necessary for regulation and oversight in a timely manner, including information on operations that have been outsourced to third parties or where a CCP proposes to undertake new activities. Information on stress tests provided to authorities should contain the scenarios and methodology employed to estimate exposures and results of the stress tests. Access to information is particularly important if the authorities need to take extraordinary actions in relation to a default.



7. Securities regulators and central banks should cooperate with each other and with other relevant authorities to achieve the safe, sound and efficient operation of CCPs and links between CCPs, to achieve the implementation of risk management practices and procedures consistent with these recommendations. The risk profile of cross-border activities varies depending on the type of the cross-border arrangement, for example, links between CCPs, cross-margining arrangements between CCPs, CCPs operating in a group structure sharing various business elements, CCPs operating in a group structure subject to a consolidated supervision, the outsourcing of services or “off-shore systems”. The justification for and level of a cooperative arrangement between relevant authorities should take into account these varying risk profiles of cross-border activities and should be addressed in a way that delivers regulation/supervision/oversight consistent with each relevant authority’s responsibilities and avoids gaps, imposing unnecessary cost and duplication of controls of CCPs. Regulators/overseers can consider a variety of approaches including (1) information-sharing arrangements; (2) coordination of regulatory/oversight actions for specific matters and issues of common interest; and (3) other cooperation arrangements. The approach selected may vary, depending on such issues as the law and regulatory approach in each jurisdiction. The approach set out in (2) above might entail a cooperative agreement for coordinating the implementation of the regulatory/oversight responsibilities of the competent authorities in line with the principles set in the 1990 Lamfalussy Report and with the cooperative oversight principles outlined in the 2005 CPSS report on ‘Central bank oversight of payment and settlement systems’. The principles governing these cooperative arrangements should be set out in a formal framework, which in the interests of transparency, should be publicly disclosed. The relevant authorities should establish prior contact channels and processes (including ones with the senior and key managers of the clearing and settlement systems) to ensure continuity of communication in case of a crisis situation. Cooperation could include co-ordination of crisis management plans as well as, to the extent permitted, early, confidential flow of information between regulators and CCPs about cross-border participants who might be in trouble. The 2008 Memorandum of Understanding on cooperation between the financial supervisory authorities, central banks and finance ministries of the European Union on cross-border financial stability provides a basis for cooperation in the management of any cross-border financial crisis.





## ASSESSMENT METHODOLOGY FOR CCPs

### RCCP 1 (LEGAL RISK)

#### E 1 Key questions

1. Are the laws and regulations governing the operation of a CCP and the rules, procedures, and contractual provisions for its participants, clearly stated, internally coherent, and readily accessible to participants and the public **for all cleared products**?
2. Does the legal framework demonstrate a high degree of assurance that there is a clear and effective legal basis for:
  - The CCP to act as counterparty, including the legal basis for novation or open offer **in relation to all cleared products**.
  - The timing of assumption of liability as CCP.
  - Netting arrangements, **acceleration and terminations of outstanding obligations**.
  - The CCP's interest in collateral (including margin) that a participant pledges or transfers to the CCP and prevents the defeat of such interest by the participant or a third party.
  - Default procedures.
  - Finality of transfers of funds and financial instruments.
  - Other significant aspects of the CCP's operations, risk management procedures and related rules **vis-à-vis all participants including – if applicable – assets provided by non clearing participants**.
3. Are the rules, procedures, and contracts of the CCP enforceable when a CCP participant, a linked CCP or an interoperable CCP or a participant in a linked or interoperable CCP defaults or becomes insolvent? Is there a high degree of assurance that actions taken under such rules and procedures may not later be stayed, avoided or reversed?
4. Is there a significant level of cross-border participation in the CCP? Has the CCP determined whether there are other jurisdictions relevant for determining the adequacy of the legal framework? Has the legal framework been evaluated for the other relevant jurisdictions? Do laws and rules support the design of any cross-border arrangement and provide adequate protection to both CCPs in the operation of the arrangement? Are there conflicts of laws issues and, if so, have they been addressed? Have cross-border collateral arrangements been evaluated? Do linked or interoperable CCPs identify, disclose and address any additional legal risks?



5. Does national law allow for the CCP to be designated according to the Settlement Finality Directive? If so, have the relevant authorities actually designated the CCP?

## **E 2 Assignment of an assessment category**

### **1. Observed**

- a. The laws and regulations governing the operation of the CCP and the CCP's rules, procedures, and contractual provisions for its participants, are clearly stated, internally coherent, and readily accessible to participants and the public. (Q1)
- b. The legal framework demonstrates a high degree of assurance that there is a clear and effective legal basis for all of the CCP's operations and risk management procedures. (Q2)
- c. The rules, procedures, and contracts of the CCP are enforceable even in the case of the insolvency of a CCP participant, of a linked CCP or of an interoperable CCP and there is a high degree of assurance that actions taken under such rules and procedures may not later be stayed, avoided or reversed. (Q3)
- d. The CCP has identified the relevant jurisdictions in which it has cross-border arrangements and has taken steps to address conflict of laws issues; or it is not necessary to address conflict of laws issues in assessing risks because cross-border participation is insignificant. (Q4)
- e. Where applicable the CCP has sought designation according to the Settlement Finality Directive. (Q5)

### **2. Broadly observed**

- a. 1(a), 1(b), 1(c) and 1(e) are satisfied with only minor exceptions that do not risk undermining the safety and effectiveness of the CCP. (Q1, Q2, Q3, and Q5)
- b. 1(d) is not satisfied (Q4).

### **3. Partly observed**

- a. 1 (a) and (e) are fulfilled with minor exceptions but the general safety and soundness of the CCP is maintained. (Q 1, Q 5).
- b. 1(b) is partly satisfied. The legal framework does not demonstrate a high degree of legal assurance for some aspects of the CCP's operations that while important and posing some risks do not jeopardize the overall safety and soundness of the CCP. (Q2)
- c. Or 1c is partly satisfied. There are some limited cases where rules and contractual arrangements may not be fully enforceable in the event of the insolvency or bankruptcy of a system participant, of a linked CCP or of an interoperable CCP but the CCP's actions cannot be stayed, avoided or reversed. (Q3)



#### 4. Non-observed

- a. Aspects of the CCP's operations or risk management procedures are not supported by the legal framework and this poses risks to the overall safety and soundness of the CCP. (Q2)
- b. Or: there is no demonstrated assurance that the rules and contracts are enforceable in the event of the default or insolvency of a CCP participant, of a linked CCP or of an interoperable CCP or the CCP's actions can be stayed, avoided or reversed. (Q3)

### E 3 Explanatory note

1. In addition to supporting the core CCP activities discussed in this section, a well-developed legal framework should have a well-defined system of property, contract, securities, trust, bankruptcy, and tax laws. Also, the legal framework must permit relatively speedy access to the court (and, if applicable, arbitration) systems, must produce final judgments, and must provide a relatively convenient mechanism to enforce judgments.
2. In assessing legal risk, the phrase "high degree of assurance" is used frequently. This is because statutes and rules are often untested in court, and so CCPs and participants often rely on opinions of legal counsel as to the likely outcome of possible challenges to the scope and enforceability of such provisions. Clearly, a "high degree of assurance" can be demonstrated by an actual insolvency situation in which statutes and rules proved to be sound.

## **RCCP 5 (OTHER RISK CONTROLS)**

### E 1 Key questions

1. Does the CCP maintain sufficient financial resources to cover potential residual losses that exceed the losses to be covered by margin requirements? Has the CCP developed scenarios of extreme but plausible market conditions for this purpose and conducted stress tests accordingly? What scenarios are evaluated? Do the scenarios include the most volatile periods that have been experienced by the markets for which the CCP provides services? Does the CCP at least have sufficient resources in the event of default by the participant with the largest exposure? Has the potential for multiple simultaneous defaults been evaluated? Are stress tests performed at least monthly, with a comprehensive reconsideration of models, parameters and scenarios occurring at least annually? Does the CCP have a clear policy on



actions to be taken in the event stress testing results indicate resources are not likely to be adequate to meet its obligations resulting from a default? Has it adhered to that policy? Is the policy made available to participants and authorities?

2. What are the types and values of resources that the CCP has available to cover losses from participants' defaults? Is there a high degree of assurance that the CCP will be able to draw on those resources for the anticipated value in the event of a participant's default? **How is use of the resources by the CCP ordered?** Do the CCP's rules prohibit them from being used to cover operating losses or losses from other CCP activities?
3. Are any of the resources that the CCP is relying upon to cover losses from defaults not immediately available to meet the CCP's obligations? If so, has the CCP obtained committed credit lines subject only to presentment that allow it to borrow against those assets? If so, can those lines be drawn upon sufficiently quickly to ensure that the CCP can meet its obligations when due? Do the CCP's rules ensure that the resources posted by a defaulter are used prior to other financial resources in covering losses?

## **E 2 Assignment of an assessment category**

1. Observed
  - a. Based upon its stress test procedures, the CCP has sufficient financial resources to cover potential residual losses that exceed the losses to be covered by margin requirements. The CCP is at least able to withstand a default by the participant to which it has the largest exposure in extreme but plausible market conditions. There is a high degree of assurance that the CCP can draw on the anticipated value of its financial resources in the event of a default. (Q1, 2)
  - b. The CCP uses an appropriate stress test procedure to evaluate the adequacy of its resources. The procedure:
    - (i.) Assesses the adequacy of resources in the event of a default in extreme conditions at least monthly, and more frequently when markets are unusually volatile or become less liquid or the size or concentration of positions held by its participants increases significantly; comprehensive tests (including full model and parameter validations and consideration of scenario choices) are performed at least annually;
    - (ii.) Scenarios include the default of the participant with the largest potential obligation as well as defaults by two or more participants (particularly related group members or affiliates); the most volatile periods that have been experienced by the markets for which the CCP provides services as well as appropriate theoretical scenarios;



(iii.) Assumptions are disclosed to participants and authorities; stress testing procedures include a clear and transparent policy on actions to be taken in the event resources potentially are not adequate. (Q1)

- c. The CCP has appropriate credit lines that allow it to borrow against assets not immediately available. The CCP's rules ensure that the resources posted by a defaulter are used prior to other financial resources in covering losses. (Q3)

2. Broadly observed

- a. 1(a) and 1(b) are satisfied. (Q1, 2)
- b. But: 1(c) is not fully satisfied. (Q3) There are some limited circumstances in which the financial resources on which the CCP depends would not be immediately available and the liquidity facilities of the CCP are not adequate.

3. Partly observed

- a. 1(b) is not fully satisfied. There are some weaknesses in the CCP's stress testing procedures. (Q1)

4. Non-observed

- a. 1(a) or 1(b) is not satisfied. Financial resources fall short of the amount that the CCP's stress tests show is needed to meet the standard or there are serious weaknesses in the CCP's stress testing procedures. (Q1, Q2)

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### E 3 Explanatory notes

1. The effect on market values if the collateral held by a CCP is relatively concentrated should be taken into account. In case a CCP uses an insurance policy, letter of credit or parental guarantee as part of its financial resources, the precise circumstances under which it can draw on them and the speed of payout should be carefully evaluated in judging the overall adequacy of the resources.
2. A CCP should not rely primarily on contingent obligations such as insurance, parental guarantees or letters of credit. A CCP also should carefully consider its reliance on letters of credit, guarantees or securities of a participant or the affiliate of a participant. In case of a default of the participant itself, financial resources that were obligations of the participant could not be used and the availability of those provided by an affiliate could be questionable. The aggregate value of different types of guarantees from the same organisation should be monitored and limited.

### RCCP 14 (TRANSPARENCY)



## E 1 Key questions

1. Does the CCP disclose to market participants its rules, regulations, relevant laws, governance procedures, risks, steps taken to mitigate risks, the rights and obligations of participants and the costs of using the CCP services? Does the CCP make clear when and in what circumstances it assumes counterparty exposure and any restriction or limitations on its fulfilment of its obligations? **Does the CCP provide information on the level of account separation it can provide thus contributing to asset segregation?** Does the CCP disclose appropriate quantitative information on its clearing, netting, and settlement activities? Does the CCP provide market participants with sufficient information on default procedures and stress testing? Does the CCP disclose information on the main statistics and, where relevant, the balance sheet of the system's operator? Does the CCP publicly and clearly disclose its risk exposure policy and risk management methodology? **Does the CCP disclose the way in which it determines prices and therefore its exposure vis-à-vis its participants?**
2. How is information made available? Is the information accessible through the internet? In what language or languages? In what form?
3. Are there regular reviews to ensure the information contained in the disclosures remains current, complete and accurate?

## E 2 Assignment of an assessment category

1. Observed
  - a. The CCP provides market participants with sufficient information necessary to evaluate the risks and costs of using its services. (Q1)
  - b. Information is easily accessible, at least through the internet. Information is available in a language commonly used in financial markets as well as in at least one of the domestic languages. (Q2)
  - c. The accuracy and completeness of disclosures are periodically reviewed by the CCP and at least once a year or when major changes occur. (Q3)
2. Broadly observed
  - a. 1(a) and 1(c) are satisfied. (Q1, 3)
  - b. But: 1(b) is not fully satisfied. Information is available in a language commonly used in financial markets, but is not easily accessible through the internet. (Q2)
3. Partly observed



- a. 1(a) is satisfied. (Q1)
- b. But: 1(b) or 1(c) is not satisfied. (Q3)

4. Non-observed

- a. 1(a) is not satisfied. (Q1)