FSB FINANCIAL STABILITY BOARD

Guidance on Central Counterparty Resolution and Resolution Planning

Consultative Document

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The Financial Stability Board (FSB) is seeking comments on its proposed "Guidance on Central Counterparty Resolution and Resolution Planning".

The FSB, together with the Basel Committee on Banking Supervision (BCBS), the Committee on Payments and Market Infrastructures (CPMI), and the International Organization of Securities Commissions (IOSCO), agreed on a joint workplan to coordinate their actions to enhance resilience, recovery and resolvability of central counterparties (CCPs).[1] Under this workplan, the FSB agreed to "*consider the need for, and develop as appropriate, standards or guidance for CCP resolution planning, resolution strategies and resolution tools, including cross-border coordination and recognition of resolution actions, which should build on the Key Attributes. Such standards or guidance would aim to ensure that any CCP can be successfully resolved without resort to a government "bailout", and without resulting in contagion to other parts of the financial system.*"

On 16 August 2016, the FSB published a discussion note on *Essential Aspects of CCP Resolution Planning*[2] that sought comments on aspects of CCP resolution that are core to the design of effective resolution strategies. Based on the responses[3] to this discussion note and further consultations amongst FSB member authorities, the FSB has developed a proposal for guidance to assist authorities and jurisdictions with implementing effective resolution regimes and developing credible resolution strategies and plans for CCPs in a manner consistent with the FSB *Key Attributes of Effective Resolution Regimes for Financial Institutions* ('*Key Attributes*')[4] and the guidance on financial market infrastructure (FMI) resolution in II-Annex 1 to the *Key Attributes* ('FMI Annex').

This consultative document is seeking comments on the proposed guidance and in particular on:

- the overall objectives of CCP resolution and resolution planning (Section 1);
- the powers that resolution authorities should have to maintain the continuity of critical CCP functions, return the CCP to a matched book and address default and non-default losses (Section 2);
- the potential indicators of circumstances that could lead to a determination to trigger resolution (Section 3);
- the treatment of equity of existing CCP owners in resolution (Section 4);
- the application of the "no creditor worse off" safeguard and determination of the insolvency counterfactual (Section 5);

[1] *2015 CCP Workplan*, April 2015 (www.fsb.org/2015/09/2015-ccp-workplan/)

[2] Financial Stability Board, *Essential Aspects of CCP Resolution Planning,* August 2016 (www.fsb.org/2016/08/essential-aspects-of-ccp-resolution-planning/)

[3] Available at www.fsb.org/2016/11/public-responses-to-the-august-2016-discussion-note-on-essential-aspects-of-ccp-resolution-planning/

[4] Financial Stability Board, *Key Attributes of Effective Resolution Regimes for Financial Institutions*, October 2014 (www.fsb.org/2014/10/r_141015/)

- the assessment of the adequacy of financial resources in resolution, including elements that the FSB should consider in future work on the quantum of resources for purposes of resolution (Section 6);
- the aspects of resolution planning and resolvability assessments (Sections 7 and 8); and
- cross-border cooperation and the cross-border enforcement of resolution actions (Sections 9 and 10).

Comments should be sent to fsb@fsb.org by Monday 13 March 2017 and will be published on the FSB's website unless it is specifically requested that comments be treated confidentially.

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Introduction

The FSB *Key Attributes of Effective Resolution Regimes for Financial Institutions* (‘*Key Attributes*’)[5] and implementation guidance on financial market infrastructure (FMI) resolution in II-Annex 1 to the *Key Attributes* (‘FMI Annex’) set out a framework for central counterparty (CCP) resolution which sits alongside the standards on resilience and recovery established in CPMI-IOSCO’s *Principles for financial market infrastructures* and its additional guidance.[6]

This proposed *Guidance on CCP Resolution and Resolution Planning* (‘Guidance’) is intended to assist authorities in their resolution planning and promote international consistency. It complements the *Key Attributes* and FMI Annex by providing guidance on implementing the *Key Attributes* and the FMI Annex in resolution arrangements for CCPs. The Guidance is not intended to either replace or supersede the *Key Attributes* or the FMI Annex and does not cover every aspect of the *Key Attributes* or the FMI Annex. It should therefore not be inferred that existing guidance in the *Key Attributes* and FMI Annex that is not restated or referred to in this document is not relevant to CCP resolution.

The FSB will continue its work on financial resources for CCP resolution and, based on further analysis and experience gained in resolution planning, determine by end-2018 whether there is need for any additional guidance.

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[5] Financial Stability Board, *Key Attributes of Effective Resolution Regimes for Financial Institutions*, October 2014 (www.fsb.org/2014/10/r_141015/)

[6] CPSS-IOSCO, *Principles for financial market infrastructures*, April 2012 (the PFMI) (www.bis.org/cpmi/publ/d101.htm) and CPMI-IOSCO, *Recovery of financial market infrastructures*, October 2014 (www.bis.org/cpmi/publ/d121.htm)

1. Objectives of CCP resolution and resolution planning

(Key Attributes Preamble; FMI Annex 1.1, 3.1)

CCP resolution should have as its objective the pursuit of financial stability and ensure the continuity of critical CCP functions in all jurisdictions where those functions are critical and without exposing taxpayers to risk of loss.

Effective CCP resolution planning should have regard to maintaining incentives for CCPs, clearing members, and market participants to centrally clear and to engage constructively in efforts to achieve a successful default management or recovery and so reduce the likelihood of resolution.

1.1 The objectives of CCP resolution can be achieved either by:

(i) restoring the ability of the CCP to continue to perform its critical functions as a going concern;

(ii) or ensuring continued performance of those functions by another entity or arrangement (including a bridge entity established by the resolution authority) coupled with the orderly wind-down of the residual CCP in resolution.

1.2 CCP resolution should seek to:

(i) maintain market and public confidence while minimising contagion to the CCP's participants, any entities affiliated to the CCP and to other FMIs;

(ii) avoid any disruption in the operation of links between the CCP in resolution and other FMIs where such disruptions would have a material negative effect on financial stability or the functioning of markets; and

(iii) maintain continuous access by participants to securities or cash collateral posted to and held by the CCP in accordance with its rules and that is owed to such participants.

2. Resolution authority and resolution powers

(Key Attributes 2, 3 and 6.5; FMI Annex 3, 4.1-4.2, 4.4-4.16 and 7.2)

A designated authority ('resolution authority')[7] should have all the powers that are necessary to carry out an orderly resolution of a CCP, in particular powers and tools to:

(i) enforce any outstanding contractual obligations, including under the CCP's rules and arrangements;

(ii) continue to operate temporarily the CCP;

[7] Consistent with Key Attribute 2.1, references in this Guidance to 'resolution authority' include references to more than one authority where two or more authorities are responsible for exercising resolution powers under the resolution regime.

(iii) return the CCP to a matched book where losses arise from clearing member default(s);

(iv) address any outstanding default losses and non-default losses;

(v) replenish financial resources within an appropriate timeframe to a level sufficient to maintain regulatory approval;

(vi) write down (fully or partially) the equity of the CCP and, where appropriate, unsecured liabilities; and, if appropriate, convert unsecured liabilities into equity or other instruments of ownership of the CCP or of a successor entity ('bail-in');

(vii) transfer critical functions to a solvent third party or bridge CCP; and

(viii) wind down operations not judged to be critical functions.

The resolution authority's powers should be set out in the jurisdiction's legal framework. They should, to the extent appropriate, be reflected in the CCP's rules and arrangements.

Enforcing contractual obligations

2.1 Upon entry of the CCP into resolution, the resolution authority should have the power to enforce any outstanding contractual rights and obligations of the CCP, including any existing and outstanding contractual obligations of the CCP's participants to meet cash calls or make further contributions to a default fund, or any other rules and arrangements of the CCP for the allocation of both default and non-default losses (including for the repayment of liquidity providers) where they have not been already applied exhaustively by the CCP prior to resolution.

2.2 There should be a presumption that the resolution authority continues to follow the steps and processes under the CCP's rules and arrangements where it intervenes before these have been exhausted, as these will be known to the CCP, its participants and the markets served by the CCP. If necessary to achieve the resolution objectives and avoid significant adverse effects on the financial system, the resolution authority should be able to refrain from enforcing certain contractual rights and obligations under the CCP's rules and arrangements or otherwise depart from the CCP's rules and arrangements. This should be subject to explicit limits and safeguards consistent with the *Key Attributes*, the FMI Annex and in particular paragraphs 2.7 (forced allocation), 2.9 and 2.14 (cash call procedures), 2.11 (initial margin), 2.13 (write-downs), and Section 5 (no creditor worse off safeguard) of this Guidance. If the resolution authority refrains from enforcing certain contractual rights and obligations under the CCP's rules and arrangements or otherwise departs from the CCP's rules and arrangements, it should do so in a manner that does not discriminate on the basis of nationality (consistent with Key Attribute 7.4).

Powers to return to a matched book

2.3 The resolution authority should have the power to restore the CCP to a matched book by soliciting voluntary actions, conducting auctions or by tearing up or otherwise terminating contracts.

Partial tear up

2.4 The resolution authority should only consider applying a partial tear up if market-based actions to return to a matched book (e.g. auctions or direct liquidation of positions into the market) have failed or are expected to fail, or would likely result in losses that exceed the prefunded and committed financial resources that are available under the CCP's rules and arrangements to cover those losses, or would otherwise compromise financial stability.

2.5 As part of its resolution planning, the resolution authority should establish in advance the general approach it would apply in determining any contracts to be torn up. It should consider the systemic impact of tear up actions and be guided by the following:

(i) Tear up should be used for the purpose of returning the CCP to a matched book, not to allocate losses;[8] and

(ii) the price of the tear up should be based, as far as possible, on a fair market price determined on the basis of the CCP's own rules and arrangements or other appropriate price discovery method.

The resolution authority should also have regard to any provisions in the CCP's rules and arrangements regarding the use of partial tear up by the CCP as part of recovery.

Full tear up

2.6 Full tear up of all contracts, whether in an individual clearing service or a whole CCP, is a last resort tool and should only be applied if:

(i) the clearing service in question or the CCP is not critical and the full tear up will not, in the opinion of the relevant authorities, have systemic consequences for the market or participants; or

(ii) no other option would result in a better outcome for financial stability.

The price of the tear up should be based, as far as possible, on a fair market price determined on the basis of the CCP's own rules and arrangements or other appropriate price discovery method.

Forced allocation

2.7 Where the resolution authority has the explicit power to impose a forced allocation of open contracts under the legal framework and/or CCP rules and arrangements, it should, when considering its use, take into due account the impact on financial stability and use such a power only as a last-resort-tool.

Powers to address outstanding default losses and replenish financial resources in a member-default loss scenario

2.8 The resolution authority should have the power to enforce any outstanding (unexhausted) obligations of non-defaulting participants under the CCP's rules and arrangements to

[8] This is without prejudice of the ability to allocate losses e.g. by gains-based haircutting, where gains are the result of partial tear up.

honour their commitments to the CCP, including honouring cash calls or making any other contributions to the CCP.

2.9 Jurisdictions may confer on the resolution authority an explicit statutory power to require non-defaulting clearing members to make contributions in cash to the CCP up to a specific limit. Any such explicit statutory power should be subject to the presumption that it would be exercised only after at least the pre-funded waterfall is exhausted (i.e. that the statutory cash call is reserved for resolution). Any statutory cash calls and the limit up to which they may be exercised by the resolution authority should, where needed, be reflected in the CCP's rules and arrangements.[9] Clearing members should be able to assess at all times the maximum amount that they may be required to contribute under any such cash calls.

2.10 Where relevant,[10] the resolution authority should have an explicit power to reduce the value of gains payable by the CCP to non-defaulting participants (variation margin gains haircutting (VMGH)). The power should, where needed, be set out in the CCP's rules and arrangements where it is relevant to the particular CCP or clearing service.

2.11 Where a resolution authority has under its legal framework or the CCP's rules and arrangements the power to write down initial margin, such a power should only be applied to initial margin that is not bankruptcy-remote and be limited to use as a last-resort-tool. In considering including such a power in their legal framework, jurisdictions should take into due account the impact on financial stability and on incentives to centrally clear.

2.12 The resolution authority should be able, consistent with the rules and arrangements of the CCP, to replenish the CCP's financial resources including default fund and capital as soon as practicable.

Powers for non-default losses

2.13 The resolution authority should have the power to write down, where appropriate, unsecured liabilities in accordance with the creditor hierarchy in insolvency and, if appropriate, convert them into equity or other instruments of ownership of the CCP or of a successor entity to absorb losses and to replenish the capital of the CCP or a successor entity. It should be able to exercise this power where:

(i) non-default losses are not absorbed by writing down the CCP's equity, by applying any other loss allocation measures available under the CCP's rules and arrangements for non-default losses, and by applying recoveries from defaulting counterparties; and

(ii) where the current owners of the CCP are unwilling or unable to recapitalise the CCP to a level necessary for its continued authorisation.

2.14 Jurisdictions may confer to the resolution authority an explicit statutory power to require clearing members to make contributions in cash to the CCP up to a specific limit which may be exercised if the non-default losses are not fully absorbed by writing down the

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[9] Consistent with Section 10 of this Guidance, the reflection of statutory powers in the CCP's rules and procedures may support the cross-border effectiveness and cross-border enforcement of resolution actions.

[10] Some clearing services do not operate cash settled variation margin and close-out sums or similar provisions in their arrangements, therefore gains based haircutting tools may not be applicable.

CCP's equity and by applying any other loss allocation measures available under the CCP's rules and arrangements for non-default losses. Any statutory cash calls, the points in time at which they may be called and the limit up to which they may be exercised by the resolution authority should, where needed, be reflected in the CCP's rules and arrangements. Clearing members should be able to assess at all times the maximum amount that they may be required to contribute under any such cash calls.

Equity in return for contributions to the CCP resolution

2.15 The resolution authority should have the power to award appropriate amounts of equity or other instruments of ownership (or debt instruments convertible into equity) to clearing members that contributed financial resources to a resolution in excess of their obligations under the CCP's rules and arrangements, for both default-related and non-default related loss scenarios. Alternatively, the resolution authority may have the power to award to participants claims on the parent of the group to which the CCP is affiliated, where appropriate subject to the consent of the parent.

3. Entry into resolution

(Key Attribute 3.1, 12; FMI Annex 3.4-3.5, 4.3, 12)

Entry into resolution should be possible when a CCP is, or is likely to be, no longer viable or no longer able to meet applicable legal or regulatory requirements on a continuing basis, and has no reasonable prospect of returning to viability within a reasonable timeframe through other actions that could be taken by the CCP (that do not themselves compromise financial stability). The resolution authority, in consultation with other relevant authorities, should have the power and practical arrangements to place a CCP into resolution promptly and if necessary prior to the end of the CCP's existing recovery and loss allocation arrangements where:

(i) recovery measures available to the CCP, including the use of its available assets and default resources and the application of any loss allocation rules have been exhausted and failed to return the CCP to viability and continuing compliance with applicable legal and regulatory requirements, or are not being implemented in a timely manner; or

(ii) the relevant oversight, supervisory or resolution authority determines that the recovery measures available to the CCP are not reasonably likely to return the CCP to viability within the timeframe required to enable continued compliance with applicable legal and regulatory requirements, or that they are otherwise likely to compromise financial stability.

The resolution authority and other relevant authorities, including the supervisory and oversight authorities and authorities involved in cooperative arrangements or CMGs, should cooperate and communicate effectively in recovery to enable the resolution authority to act in a timely manner.

3.1 A CCP's recovery plan should be designed to address comprehensively any uncovered credit losses and liquidity shortfalls. The resolution authority, in consultation with other relevant authorities, should in principle allow for recovery measures to proceed where they are reasonably likely to be effective within the timeframe required. However, it is possible that the CCP's implementation of the recovery measures will not be sufficient to return the CCP to viability in a timely manner; or the CCP will be unable to apply recovery measures in a manner that does not give rise to significant risks to financial stability; or that confidence in the CCP is failing and participants will be unwilling to participate fully in recovery in a way that maintains continuity of critical functions.

3.2 In determining whether to place a CCP into resolution, the resolution authority, in consultation with other relevant authorities, should take into account the particular circumstances prevailing at the time of the member default(s) or other stress event and a broad range of factors, including the potential impact of the CCP's recovery actions on the markets served and financial system and potential availability of new resources or options in resolution to support critical functions and maintain financial stability.

3.3 Resolution authorities should consider communicating publicly some of the indicators that would inform their determination to trigger resolution. The potential indicators set out below for default losses and non-default losses are factors that may inform a determination of whether to place a CCP into resolution and should not be regarded as exhaustive or as fixed or automatic triggers.

Potential indicators relating to default losses

3.4 In the case of default losses, potential indicators of circumstances that could lead to a determination to trigger resolution might include that, in the judgement of the relevant authorities:

(i) the CCP is or will likely be unable to return to a matched book, or can only do so by actions that would require resources in excess of its available prefunded and committed financial resources, compromise financial stability or by actions that create significant, unpredictable exposures for the CCP's participants;

(ii) the CCP is or is likely to be unable to cover losses, or exhausts or is likely to exhaust its loss allocation tools and arrangements or can only cover losses with actions that would create significant, unpredictable losses for the CCP's participants;

(iii) the CCP is unable or likely to be unable to replenish its financial resources within a reasonable time frame to a level that can deliver continuity of critical functions and meet regulatory compliance;

(iv) the CCP's participants no longer have confidence in its ability to manage risks effectively; or

(v) the management of the CCP is not implementing in a timely manner the default management processes or recovery actions creating material risk to the continuity of the critical functions.

Potential indicators relating to non-default losses

3.5 In the case of non-default losses, potential indicators of circumstances that could lead to a determination to trigger resolution might include that, in the judgement of the relevant authorities:

(i) the CCP's capital is or is likely to be exhausted or severely depleted below regulatory requirements, notwithstanding any loss allocation rules and arrangements for the type of loss, and the current owners of the CCP are unwilling or unable to recapitalise the CCP;

(ii) the CCP can only cover losses with actions that would create significant, unpredictable losses for the CCP's participants; or

(iii) the CCP fails or is expected to fail to comply with other regulatory requirements for authorisation and such failure or expected failure cannot be addressed by supervisory actions or threatens financial stability.

Cooperation between relevant authorities in the lead up to resolution

3.6 In order to enable resolution authorities to act promptly, relevant authorities, including the supervisory authorities, central banks, resolution authorities, finance ministries and the public authorities responsible for guarantee schemes, if any, involved in cooperative arrangements and Crisis Management Groups (CMGs) for the CCPs concerned, should cooperate and keep each other appropriately informed. Timely and frequent communication among supervisory, oversight and resolution authorities about a CCP's condition and risks should facilitate effective crisis preparedness well in advance of any specific issues the CCP may encounter. Cooperation and communication should intensify when a CCP's recovery process is initiated.

3.7 Authorities should ensure that CCPs have in place adequate processes and real-time risk management capabilities to capture, monitor and report data that is necessary to determine whether to place a CCP into resolution to the relevant authorities.

3.8 Jurisdictions should ensure that the relevant authorities can share information, in particular where the resolution authority is different from the supervisor or overseer.

4. Allocating losses to equity holders in resolution

(Key Attribute 5.1)

Existing owners' equity in the CCP should absorb losses in resolution, to the extent not already written down upon enforcement of the CCP's rules and contractual arrangements. The power to write down equity of the CCP in resolution should be set out in the legal framework and, where needed, reflected in the CCP's rules and arrangements, and its constitutive arrangements (e.g. articles of incorporation).

Default losses

4.1 In resolution, equity should be fully loss absorbing.[11] It should be clear and transparent at which point in resolution any remaining equity would be written down, for example, no later than at the point at which cash calls available under the CCP's rules and arrangements have been exhausted.

Non-default losses

4.2 In resolution, equity should absorb non-default losses no later than at the point at which any applicable loss allocation arrangements available under the CCP's rules and arrangements for non-default losses have been exhausted. Moreover, equity should be written down before losses are allocated to creditors in accordance with the creditor hierarchy under the applicable legal framework.

Alternative approaches

4.3 Resolution authorities may consider alternative approaches to allocating losses to existing equity holders and recapitalising the CCP, such as writing down the equity and recapitalising the CCP by selling new equity in the CCP and using the proceeds to recapitalise the CCP and replenish its financial resources. The approach chosen may vary depending on the structure of the CCP (for example, single or multi-service), the value of the clearing service in which the default has taken place relative to the equity of the CCP, and constraints under applicable law.

5. No creditor worse off safeguard

(Key Attributes 5.1-5.2; FMI Annex 6.1)

CCP participants (if and to the extent that the resolution authority departs in resolution from the loss allocation under the CCP's rules and arrangements), equity holders and creditors should have a right to compensation where they do not receive in resolution at a minimum what they would have received if, instead of resolution, the CCP or relevant clearing service had been liquidated or terminated under the applicable insolvency law ("no creditor worse off" (NCWO) safeguard).

For the purposes of determining whether a participant, equity holder or creditor is worse off as a result of resolution measures than in liquidation or termination of the CCP or relevant clearing service under applicable insolvency law, the assessment of the losses that would have been incurred or the recoveries that would have been made if the CCP

[11] In recovery, under current arrangements equity holders may absorb default losses only to the limited extent provided for contractually in the CCP rules and arrangements (skin-in-the-game). The general principle set out in the *Key Attributes* is that equity should absorb losses first in resolution, consistent with the ranking of equity holders in insolvency. Key Attribute 5.1 "…equity should absorb losses first, and no loss should be imposed on senior debt holders until subordinated debt (including all regulatory capital instruments) has been written-off entirely (whether or not that loss-absorption through write-down is accompanied by conversion to equity)".

had been subject to liquidation or termination should assume the full application of the CCP's rules and arrangements for loss allocation.

The counterfactual underlying the NCWO safeguard should be clear and transparent for both default and non-default loss scenarios.

5.1 For the purposes of determining the NCWO counterfactual, the assessment of the losses that would have been incurred and of the recoveries that would have been made by CCP participants, equity holders and creditors if the CCP or relevant clearing service had been liquidated or terminated should assume the full application of the CCP's rules and arrangements and any other contractual agreements subject to the applicable insolvency law.[12] Where the CCP's rules and arrangements reserve powers to be exercised by the resolution authority it should be made clear and transparent whether these powers should be assumed to be applied in the NCWO counterfactual.

5.2 If and to the extent that the resolution authority departs from the CCP's rules and arrangements, CCP participants to whom losses are allocated should be covered by the safeguard where the losses incurred in resolution exceed the losses that would have been incurred in liquidation or termination from the full application of the CCP's loss allocation arrangements consistent with applicable insolvency law.

5.3 In specific circumstances, the resolution authority may need to depart from the general principle of equal (*pari passu*) treatment of creditors within the same class and order of loss allocation in accordance with the CCP's rules and arrangements, if necessary to achieve the resolution objectives or maximise value for all creditors. The resolution authority should not be prohibited from doing so, if necessary, to achieve the resolution objectives (see Section 2.2).

5.4 Statutory or contractual subordination of liabilities may be used to shield operationally critical liabilities that are important to support resolution objectives (for example, relating to the provision of liquidity to the CCP) from loss.

No creditor worse off counterfactual for default losses

5.5 For resolution triggered by member default losses, the relevant counterfactual is the liquidation or termination of the CCP or relevant clearing service in accordance with the applicable insolvency laws, assuming full application of the CCP's rules and arrangements and any other contractual agreements in accordance with the applicable insolvency law, including tear up of contracts in accordance with the rulebook, and where possible utilising the CCP's pricing methodology or other appropriate price discovery method. Where consistent with the legal framework, the counterfactual should respect segregation and limited recourse provisions between different clearing services within the CCP. When assessing what treatment creditors (including equity holders and participants)

[12] Insolvency law establishes a creditor hierarchy that determines the order in which losses are allocated in liquidation. In many jurisdictions that order also takes into account contractual agreements between the insolvent legal entity and its obligors and creditors regarding the calling in of outstanding obligations and the order in which creditors receive recoveries from the insolvency.

would have received under the NCWO counterfactual, the resolution authority (or other relevant authority) should take into consideration the following:

(i) any uncalled but available rights of assessment of the CCP as at the date of entry into resolution;

(ii) where actual payment obligations (including cash calls) are not met in full by members in the resolution, the amounts actually received as well as the value of claims against clearing members and other creditors who may have defaulted on such obligations;

(iii) any limited recourse provisions in the CCP's rules, and the CCP's rules and arrangements for loss allocation, including for the tear up of contracts;

(iv) the assumption that tear up occurs at the same point in time as any tear up in resolution;

(v) the price of any torn-up contracts as determined in accordance with the rules of the CCP and where possible utilising the CCP's pricing methodology or other appropriate price discovery method, and consistent with applicable insolvency law.

No creditor worse off counterfactual for non-default losses

5.6 For non-default losses, the relevant counterfactual is the liquidation of the CCP in accordance with the applicable insolvency laws, assuming full application of any loss sharing arrangements by the CCP relevant to the type of loss incurred, in accordance with the relevant applicable insolvency law.

6. Financial resources

(Key Attributes 6.2-6.4; FMI Annex 4.11, 7.1-7.2)

As part of resolution planning, the resolution authority should make appropriately prudent assumptions about the financial resources that may be required to achieve the resolution objectives and the resources that it expects to remain available under the CCP's rules and arrangements at the time of entry into resolution to:

(i) address uncovered losses;

(ii) replenish resources in line with regulatory requirements within an appropriate timeframe;

(iii) meet costs associated with maintaining and operating the critical functions of the CCP until exit from resolution, including the costs for critical dependencies such as service-level agreements, third-party service providers, or other key dependencies; and

(iv) meet temporary liquidity needs.

For CCPs that are systemically important in more than one jurisdiction, the resolution authority should duly consider the views of the CMG in its assessment.

Jurisdictions should have effective resolution regimes and policies in place so that authorities are not constrained to rely on public bail-out funds to resolve a CCP. If, as a last resort and for the overarching purpose of maintaining financial stability, a jurisdiction determines that temporary public funding is necessary to achieve an orderly resolution, the resolution authority should have the power to recover such funding from the CCP or any successor entity, or any recoveries made against a defaulting counterparty of the CCP, or from CCP participants or other market participants, in order to minimise the risk of losses to taxpayers and in a way that maintains incentives to support recovery.

This power should be supported by credible and effective enforcement mechanisms and sufficient transparency in advance as to how it would operate and to whom it would apply.

6.1 As part of resolution planning, the resolution authority should assess regularly what financial resources and tools can reasonably be expected to be available to it under the resolution regime and the CCP's rules and arrangements at the time of entry into resolution, and whether those resources would be sufficient to achieve the resolution objectives in the case of both default and non-default losses.

6.2 For default losses, the resolution authority should consider the following aspects in its assessment:

(i) the risk characteristics, complexity and pricing uncertainties of the products cleared, and the related potential margin of error in initial and variation margin calculations;

(ii) the size, structure and liquidity of the underlying market in stressed conditions;

(iii) the number of clearing member defaults that would be covered by available prefunded and committed resources under extreme but plausible conditions;

(iv) the availability, and potential impact on affected participants, of tools such as partial tear up and variation margin gains haircutting; and

(v) the credibility of unfunded arrangements in meeting the CCP's potential needs.

6.3 In addition, and for all types of loss, the resolution authority should assess the substitutability of the CCP in the markets it serves, the credibility of any additional arrangements, such as insurance agreements or parental guarantees, that may be available to address uncovered credit losses.

6.4 Authorities should ensure that CCPs have in place adequate processes and information management processes to provide the authorities with the necessary data and information required for undertaking the assessment.

Provision and recovery of temporary funding

6.5 In jurisdictions where temporary public funding arrangements are available for CCP resolution,[13] any public funding provided by the authorities should be relied on only as

[13] Potential arrangements are described in Key Attribute 6 and FMI Annex section 7.

last resort, be limited in time, and be recoverable over an appropriate time period from the assets of the CCP (including any claims against defaulting counterparties' estates or recoveries thereon), its participants and/or other market participants.

6.6 In determining the amounts to be recovered, the resolution authority should take into consideration the amounts that CCP participants would otherwise have been required to contribute under the CCP's rules and arrangements and in resolution, had temporary public funds not been provided by the authorities, and, if appropriate, the costs of providing those funds.

6.7 Any recoveries by the CCP from the estate of a defaulting counterparty (including defaulting clearing members) should first be used to pay back temporary public funds. If the recoveries from the estate of the defaulter(s) exceed the amount of funding provided by authorities, the excess should be treated in accordance with the CCP's rules and arrangements or otherwise be redistributed to clearing participants and/or other market participants who contributed to the loss allocation arrangements of the CCP.

6.8 Arrangements for the recovery of temporary public funding should be publicly disclosed as appropriate. Where appropriate they should be written into the legal framework and the CCP's rules and arrangements in order to help provide clarity and transparency regarding how authorities would recover funds and to provide a legal basis to collect from both domestic and foreign participants of the CCP.

6.9 Other recovery methods of temporary public funding, such as selling an equity stake in the CCP or imposing transaction levies to recoup temporary public funds from a broader base, may also be considered.

7. Resolution Planning

(Key Attributes 11.1-11.4, 11.6-11.8; FMI Annex 11)

For all systemically important CCPs, the home resolution authority should develop, in cooperation with the CCP's oversight or supervisory authorities (where distinct from the resolution authority), a resolution plan that takes into account the CCP's unique features and risks and its recovery plan, and addresses default and non-default scenarios and a combination of both.

In the case of a CCP that is systemically important in more than one jurisdiction, the home resolution authority should develop the resolution plan in cooperation with the CMG.

7.1 The resolution authority should develop and update regularly resolution plans that address resolution scenarios with default losses and non-default losses and a combination of both, distinguishing between different types of non-default loss where relevant.

7.2 Given the close relationship between resolution and recovery, the development of the resolution plan should start with the CCP's recovery plan.

7.3 The resolution plan should consider different scenarios and identify appropriate tools and actions to:

(i) fully address any outstanding losses;

(ii) replenish the financial resources of the CCP to a level sufficient to meet regulatory requirements and support the continued and timely operation of the critical functions of the CCP; and

(iii) wind down those functions not judged to be critical for financial stability, where necessary or appropriate.

7.4 For losses arising from member default, the resolution plan should, in addition to 7.3, identify appropriate tools and actions to return the CCP to a matched book.

7.5 The resolution plan should include a description of the following aspects:

(i) the decision-making process for triggering resolution including, if applicable, a general description of any indicators that the resolution authority is required to take into account when deciding whether to put the CCP into resolution, or that it would expect to be material to that decision. In the case of non-default losses in particular, it should have regard to the different sources of losses and the speed with which such losses can crystallise;

(ii) the critical services and functions that are likely to be continued in resolution;

(iii) in the case of a member default, the tool(s) that the resolution authority would expect to use to return to a matched book and the arrangements for allocating the financial losses associated with these measures;

(iv) the general process or approach the resolution authority would expect to follow in determining the scope and price of any tear up of cleared contracts;

(v) to the extent that the resolution authority would need to depart from the CCP's rules and arrangements, the general process or approach the resolution authority would expect to follow in calculating and allocating losses, including the choice and sequencing of different loss allocation tools, and how the resolution authority would apply the NCWO safeguard and assess losses under the counterfactual for these purposes. Where relevant, the plan should also clarify whether the general process or approach would differ depending on the specific resolution scenario, including different types of non-default risks;

(vi) the resolution authority's general expectations as to how and in what time frame the financial resources of the CCP, i.e. default fund and regulatory capital including own contributions to default funds, would be replenished, and any considerations relevant to that expectation;

(vii) any ancillary actions that the resolution authority would generally expect to take or consider when implementing the resolution strategy, for example stays on early termination rights;

(viii) how the plan would address intra-group dependencies, interoperability arrangements and links with other FMIs, such as exchanges and central securities depositories (CSDs), whether in the same group as the CCP in question or not;

(ix) how the plan would support operational continuity, including where threats to the viability of the CCP arise from an interruption or loss of critical third party services, for example arising from the failure of a CSD;

(x) how the resolution authority would address in a timely manner any need for consents or change of control or other approvals;

(xi) any steps necessary for the CCP to maintain status as a Qualifying CCP;[14]

(xii) the wind down of those functions judged not to be critical for financial stability, where necessary or appropriate;

(xiii) the approach that the resolution authority would expect to take to coordination with other authorities during the resolution, including with authorities within the CMG; any authorities overseeing concurrent default management procedures or resolutions of other relevant CCPs; the supervisory and resolution authorities of clearing members or, where relevant, authorities responsible for setting clearing mandates for specific products, if different from the resolution authority, macroprudential authorities or authorities for financial stability oversight, as well as other relevant authorities not participating in the CMG; and

(xiv) in jurisdictions where temporary funding arrangements are available, the conditions and processes for considering the provision of temporary public funding in resolution for the CCP and the arrangements for recovering these funds.

7.6 The resolution plan should also take into account the following:

(i) the ownership, legal and organisational structure of the CCP, including whether it is part of a larger group of FMIs or other financial institutions;

(ii) the availability of other CCPs that could credibly and feasibly act as a substitute for the critical functions of the CCP;

(iii) the nature and diversity of the CCP's membership as well as its indirect users; and

(iv) whether the CCP clears any products or classes that are subject to central clearing mandates.

7.7 Resolution authorities should consider the merits of publicly disclosing some elements of the resolution plan. They should take into account the effects of doing so on incentives of CCP clearing members, CCP owners, and market participants to participate in a CCP's default management process and recovery procedures.

[14] See Bank for International Settlements, *Capital requirements for bank exposures to central counterparties,* April 2014 (www.bis.org/publ/bcbs282.htm).

8. Resolvability assessments and addressing impediments to resolvability

(Key Attributes 10.1-10.2, 10.5, 11.1-11.4, 11.6-11.8; FMI Annex 10, 11)

The resolution authority should, in coordination with the CCP's oversight or supervisory authorities, conduct regular resolvability assessments to evaluate the feasibility and credibility of the resolution plan and to identify any legal or operational impediments to resolvability.

The oversight, supervisory or resolution authorities for CCPs should have powers to require the CCPs, where necessary, to address material impediments to resolvability, and be able to require the CCP to arrange for additional financial resources if that would be deemed necessary to achieve effective resolution.

8.1 The oversight, supervisory or resolution authorities for CCPs should have powers to require a CCP to adopt measures to improve the resolvability of the CCP including, where necessary and appropriate:

(i) changes to the rules and arrangements of the CCP, including changes to delivery, segregation or portability arrangements of participants' positions or related collateral;

(ii) operational, structural or legal changes, for example so that different CCP functions or services, such as the clearing of different products, can be dealt with separately in resolution;

(iii) changes to the terms or operation of its links with other FMIs.

In requiring any such measures the authorities should take due account of the likely effects of such changes on the soundness of operations of the CCP, including its risk management, the functioning of markets, the provision of liquidity, and the incentives of direct and indirect participants to use the CCP.

8.2 As part of the resolvability assessments, resolution authorities should, in coordination with the CCP's oversight or supervisory authorities, carry out periodic crisis management exercises and assess the adequacy of financial resources and of any funding arrangements and accordingly adopt measures to improve the resolvability of the CCP and adjust the resolution plans, where necessary.

9. Crisis Management Groups

(Key Attributes 7, 8; FMI Annex 8, 9)

For CCPs that are systemically important in more than one jurisdiction, the home resolution authority should establish a Crisis Management Group (CMG)[15] to coordinate the resolution planning and resolvability assessments.

Processes for cooperation and information sharing during a crisis and for purposes of resolution planning and resolvability assessment within the CMG should be set out in a CCP-specific cooperation agreement (CoAg).

Resolution authorities should also cooperate and share relevant information with authorities in host jurisdictions that are not represented on a CMG.

9.1 The home resolution authority is responsible for establishing CMGs for its domestic CCPs. Home and host oversight or supervisory authorities and resolution authorities should consider some or all of the following when assessing whether a CCP may be of systemic importance in more than one jurisdiction and thus a CMG should be established:

(i) the extent to which the offshore CCP's participants (or participants' parent company or group, where that relationship may create systemic effects) are located in the host's jurisdiction;

(ii) the CCP's share of the aggregate volume and value of cleared transactions that originate in the host jurisdiction;

(iii) the proportion of total volume and value of transactions cleared by the CCP that originate in the host jurisdiction;

(iv) the extent to which instruments cleared by the CCP are cleared or settled in the host jurisdiction's currency;

(v) any links the off-shore CCP has with FMIs located in the host jurisdiction;

(vi) the extent to which the offshore CCP clears instruments that are subject to mandatory clearing obligations in the host jurisdiction;

(vii) *substitutability*: the extent to which there is no readily available substitute to the offshore CCP that is a major provider of clearing services to the host jurisdiction. Consideration should be given to the degree of overlap in products cleared and critical clearing services offered, among other factors, when evaluating the availability of alternate providers in the host, or another, jurisdiction;

(viii) *interconnectedness:* the extent to which the offshore CCP is connected to the host jurisdiction by providing services that are important to the real economy in the host jurisdiction, such that its failure could create, or increase, the risk of significant liquidity or credit problems spreading among financial institutions or markets, in

[15] References in this Guidance to 'CMG' should be read as including other equivalent arrangements based on Responsibility E of the *Principles for financial market infrastructures* that are consistent with the *Key Attributes*.

that jurisdiction and threaten its financial stability; and interdependencies between CCPs other than links (e.g. cross-margining arrangements, provision of critical functions from one CCP to the other, and guarantees provided by a common parent company), where relevant, and in cases where the off-shore CCP is part of a financial group, any relevant interconnections resulting from the location of the parent company.

9.2 In determining the composition of the CMG of a CCP, the home resolution authority should be guided by the *Key Attributes* and the FMI Annex with a focus on the materiality of the CCP's operations and activities in jurisdictions for resolution planning and for executing a resolution. Consistent with the *Key Attributes* and the FMI Annex, the home resolution authority should consider including in the CMG, in addition to the relevant CCP home authorities (which are the supervisory and resolution authorities, central bank, finance ministry and the public authority responsible for guarantee schemes, if any) the following:

(i) host country supervisors where the CCP is authorised/licenced to provide clearing services;

(ii) supervisors and resolution authorities of major clearing members (e.g. jurisdictions where members accounting for a significant share of the CCP's default fund);

(iii) central banks of issue of major currencies cleared (i.e. currencies accounting for a significant share of the CCP's business);

(iv) in the case of CCPs belonging to a wider financial group, supervisors and resolution authorities of affiliated entities, that would play a significant role in the execution of the CCP's resolution plan; and

(v) if relevant, supervisors and resolution authorities of significant FMIs and trading venues operating with the CCP.

The home resolution authority may consider inviting other authorities to join the CMG or to participate on an ad hoc basis where appropriate.

Information sharing within the CMG

9.3 CCP-specific cooperation agreements (CoAgs)[16] should support information sharing for purposes of resolution and resolution planning on a multilateral basis among all CMG members, including by setting out dedicated arrangements for data confidentiality and professional secrecy.

9.4 Information to be shared should at a minimum encompass the information necessary for assessing the credibility and feasibility of the resolution plan in terms of maintaining the continuity of critical functions in a resolution and minimising systemic risk in

[16] Consistent with FMI Annex 9.3, the requirement for CoAgs may be met by crisis coordination and communication agreements, protocols or memoranda of understanding adopted in accordance with Responsibility E of the *Principles for Financial Market Infrastructures,* provided that those arrangements are adapted, amended or supplemented as necessary to support the cooperation, coordination, and information sharing for purposes of resolution and resolution planning within the CMG.

jurisdictions where the CCP is systemically important. It may also include information about cleared markets, linked FMIs or clearing members.

Cooperation and information sharing with non-CMG authorities

9.5 The home resolution authority should establish effective arrangements for cooperation and information sharing with relevant host authorities from jurisdictions where the CCP is systemically important but that are not represented on the CMG ('relevant non-CMG authorities'), taking as a starting point for those arrangements the FSB guidance on cooperation with non-CMG hosts and using, where possible and appropriate, existing cooperative arrangements between authorities.[17]

9.6 During resolution planning, the home resolution authority should share relevant information on the resolution plan with relevant non-CMG host authorities to enable them to understand the key elements of the resolution plan and the impact of contemplated resolution actions on their jurisdictions. It should seek input from these authorities as appropriate. The home resolution authority should consider any information or feedback provided by relevant non-CMG host authorities.

9.7 The home resolution authority should communicate with relevant non-CMG authorities during a crisis and consider information provided by those authorities, as necessary and appropriate. Such information sharing could be done through existing cooperation arrangements between authorities.

10. Cross-border effectiveness and enforcement of resolution actions

(Key Attribute 7; FMI Annex 8, 9)

As part of resolution planning and resolvability assessments, authorities should analyse the CCP's cross-border contractual, operational and organisational arrangements and assess the effectiveness of resolution actions in relation to those cross-border arrangements.

To support their effectiveness and enforceability on a cross-border basis resolution tools and actions should be set out in the legal framework and, where needed, be incorporated in the CCP's rules and arrangements.

Effectiveness of cross-border resolution

10.1 As part of resolution planning and resolvability assessments, the home resolution authority and CMG should identify and address any challenges to the enforceability or effectiveness of resolution actions that may arise in a cross-border context, in particular in relation to:

[17] Financial Stability Board, *Guidance on Cooperation and Information Sharing with Host Authorities of Jurisdictions where a G-SIFI has a Systemic Presence that are Not Represented on its CMG*, 3 November 2015 (www.fsb.org/2015/11/guidance-on-cooperation-and-information-sharing-with-host-authorities-of-jurisdictions-where-a-g-sifi-has-a-systemic-presence-that-are-not-represented-on-its-cmg/)

(i) interoperating arrangements and cross-margining with CCPs in other jurisdictions;

(ii) critical services and functions provided by entities that are located in other jurisdictions;

(iii) participants that are incorporated in other jurisdictions;

(iv) the use of foreign custodians, payment banks or settlement banks; and

(v) custodian relationships or collateral arrangements governed by foreign law.

10.2 To address any identified challenges the relevant authorities should consider as appropriate:

(i) agreeing to arrangements for cooperation and coordination of resolution proceedings taking place in other jurisdictions in relation to the CCP, any of its affiliated entities or CCP participants;

(ii) agreeing to procedures for supportive actions from relevant authorities in other jurisdictions, including processes to obtain new licenses, recognitions or authorisations that may be necessary as a result of resolution actions contemplated under the resolution plan; or

(iii) ensuring that, where needed, resolution actions are incorporated in the CCP's rules and arrangements or in other contractual agreements to give effect to or support the enforceability of such actions on a cross-border basis.

10.3 Where relevant, resolution authorities should ensure that they have in place appropriate communication and information sharing arrangements with the relevant domestic and foreign authorities that are competent for setting and suspending clearing mandates.

Key Terms

Cash call	A requirement for clearing members to pay an amount in cash to the CCP upon demand as set out in its rules.
Central counterparty	An entity that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the performance of open contracts.
Critical function	Systemically important activities of CCPs, i.e. functions that are vital for the real economy or for financial markets and financial stability in a jurisdiction due to the size or market share of the CCP, its external and internal interconnectedness, complexity and cross-border activities. The availability of substitutes for the CCP in providing the function is also relevant to the analysis.[18]
Initial margin haircut	A reduction in the value of initial margin that a non-defaulting participant of the CCP is entitled to return of, with no recourse to the CCP for that reduction.
Non-default loss	A loss incurred by a CCP for any reason other than the default of a clearing participant. Examples include losses on investments or due to operational failures or fraud.
Participant	A user of the CCP's clearing services, whether directly as a clearing member of the CCP, or indirectly as a client of a clearing member.
Recovery	The ability of a CCP to recover from a threat to its viability and financial strength so that it can continue to provide its critical functions without requiring the use of resolution powers by authorities.
Resolution authority	Designated administrative authority or authorities responsible for exercising the resolution powers over firms within the scope of the resolution regime. As used in this document, this term should be read to include references to more than one authority where two or more authorities are responsible for exercising resolution powers under the resolution regime.[19]
Tear up	The action of settling and cancelling (without reopening) a contract. This could be applied to some (partial tear up) or all (full tear up) contracts within a CCP or clearing service.
Variation margin	Funds that are collected and paid out to reflect current exposures resulting from actual changes in market prices.

[18] This is consistent with the definition of critical functions in the FSB's *Recovery and Resolution Planning for Systemically Important Financial Institutions: Guidance on Identification of Critical Functions and Critical Shared Services,* July 2013 (www.fsb.org/2013/07/r_130716a/)

[19] Key Attribute 2.1

Variation margin gains haircutting	The reduction of variation margin payments that a CCP is due to make to participants whose positions (in the relevant clearing services) have increased in value since a specified point in time, e.g. since the issuance of a default notice by the CCP or the last margin call by the CCP. (Participants whose positions have decreased in value are still required to pay variation margin in full.)