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Considerations for CCP Resolution

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I. Introduction

The Clearing House Association (“TCH”) and the International Swaps and Derivatives Association (“ISDA”) welcome the attention that the Financial Stability Board (“FSB”) and others have given to the resolution of systemically important central counterparties (“CCPs”). TCH and ISDA recognize the FSB’s *Key Attributes of Effective Resolution Regimes for Financial Institutions* (“Key Attributes”), Annex on *Resolution of Financial Market Infrastructures and FMI (FMIs) Participants*,¹ in particular, as a key contribution to the guidance on this subject. In addition, the FSB Resolution Steering Group’s current work plan brings welcome attention to the need for appropriate standards for CCP resolution, particularly for derivatives CCPs.²

CCPs play an increasingly important role in the global financial system. Mandatory clearing has increased the volume of transactions cleared through CCPs, and, today, it is estimated that more than 70% of swaps are cleared.³ While this development has contributed to a decline in bilateral credit exposures arising from uncleared swaps, it has, at the same time, significantly increased concentrations of risk within CCPs. These increased risk concentrations can be expected to continue in the near to medium term.

These developments have led to the recognition that, during a period of severe market stress, the failure of a CCP could potentially contribute to and/or exacerbate financial instability and systemic risk. It is now widely accepted that the potential failure, or other threats to the continued viability, of a systemically important CCP, while an unlikely event, cannot prudently be ignored.

Supervisors and industry have accordingly given increased attention to the need to mitigate this risk through enhancements to CCP resilience, appropriate recovery tools and measures to facilitate, where possible, the continuity of critical clearing services in the face of threats to a CCP’s viability. As a general matter, CCP continuity is preferably achieved through resiliency and the use of recovery tools. Nevertheless, circumstances may require the initiation of resolution. Accordingly, the identification and implementation of measures to facilitate the continuity of CCP clearing services, and to ensure that CCPs can be resolved in an orderly manner while simultaneously minimizing risks to financial stability and to taxpayers, has become an important objective for supervisors and industry alike.

Against this background, initiatives such as the Key Attributes (with respect to resolution) and the CPMI-IOSCO Report on *Recovery of financial market infrastructures*⁴ (with respect to recovery) have contributed significantly to the identification of measures that can enhance the ability of a CCP to recover from events threatening its continued viability, promote the continuity of critical clearing services and thereby decrease systemic risk during a period of extreme financial instability.

The Key Attributes, as they relate to systemically important CCPs, are an important contribution to the development of international standards for CCP resolution. This white paper is intended to build on, supplement and, in some instances, offer our perspective on the CCP resolution framework

advanced in the Key Attributes, focusing on the seven key areas summarized below.

This paper identifies a number of potentially significant resolution tools or approaches that, as noted below, require further discussion between and evaluation by the official sector and industry. Any such discussions and

evaluation should take into account, among other considerations, the need to achieve an appropriate balance between risk mitigation benefits and associated impacts on the cost of clearing. This paper is intended to bring these into focus for further discussion and analysis and does not purport to present these as comprehensive or definitive recommendations.

II. Executive Summary

The seven key elements of CCP resolution addressed in this white paper are:

1. **CCP RESOLUTION PLANS.** CCPs should be required to prepare resolution plans (i.e., 'living wills') for their orderly resolution based on standards prescribed by the relevant authorities. Resolution authorities, in consultation with other responsible authorities, should also prepare public sector 'playbooks' or 'action plans' for the orderly resolution of CCPs generally and, where appropriate, for individual CCPs, as a supplement to each jurisdiction's overall resolution framework.
 - CCP resolution plans should be designed to facilitate both continuity and resolvability should the CCP be placed in resolution. While continuity should be the preferred resolution approach, the plans must provide for an orderly wind-down of a CCP's clearing services where continuity, although desirable, cannot reasonably be expected to be achieved or

cannot be achieved without unacceptable consequences for financial stability. Orderly wind-down should generally be limited to circumstances in which the CCP, or the relevant clearing service, is no longer systemically important and/or the market that it supports no longer requires continuity, or where continuity, although desirable, cannot reasonably be expected to be achieved (e.g., if there is no prospect of a matched book or a critical mass of clearing members ("CMs") would be unwilling to continue participating as CMs in the clearing service) or cannot be achieved without unacceptable consequences for financial stability.

- CCP resolution plans should be made available to clearing participants, subject to protection of confidential content.
- The resolution plans developed by CCPs and relevant authorities should be discussed and developed in a manner designed to facilitate optimal coordination between the CCP and the relevant

authorities, and at a cross-border level, during any future crises.

- CCP resolution plans and resolution frameworks should incorporate resolution tools and strategies designed to achieve continuity, while ensuring that, in resolution, no clearing participant is divested of the entitlements and protections provided under the relevant CCP rulebook.

- In fashioning public sector action plans for CCP resolution, and in reviewing CCP resolution plans, relevant authorities should also give careful consideration to the appropriate point of entry for CCP resolution and whether the legal entity structure of the CCP would facilitate entry both at a holding company, or intermediate holding company level, and at an operating company level, or otherwise require restructuring.

2. **RESOLUTION TRIGGERS.** The Key Attributes' focus on CCP viability as a key resolution trigger is appropriate.

- The decision whether to place a CCP in resolution should be entrusted to the home country resolution authority in consultation with the CCP's supervisory regulator (or, if applicable, the CCP's supervisory college) and the home country systemic risk regulator.
- While continuity should be seen as the default objective of resolution, continuity may not always be the optimal solution or may be unavailing. Examples include circumstances in which (i) continuity

cannot be achieved without unacceptably destabilizing impacts; (ii) a critical mass of CMs would be unwilling to continue participating as CMs in the clearing service (either in the CCP, were it to emerge from resolution, or at a successor CCP to which the clearing service might be migrated); (iii) a matched book cannot reasonably be expected to be achieved either prior to or in resolution; and (iv) the affected clearing service is no longer critical to the market.

- To facilitate informed decision-making, the resolution authority, in consultation with the supervisory regulator (and other relevant authorities, as appropriate), should develop consultative and decision-making processes. These processes should support anticipatory actions, such as the initiation of resolution in order to prevent the exercise of a recovery tool that would be unacceptably destabilizing. They should also support discussions, for example, to avoid burdensome, costly and possibly procyclical measures to achieve continuity through resolution where doing so would be counterproductive or unavailing.

3. **RESOLUTION FRAMEWORK AND AUTHORITY.** Each jurisdiction hosting a systemically important CCP should have in place a resolution framework and a resolution authority with the necessary legal capacity and authority to achieve continuity of the CCP's critical functions.

- These frameworks should take into account any applicable interoperability arrangements with other financial market infrastructures ("FMIs") (e.g., cross-

margin arrangements) that may be relevant to resolution.

- Existing and emerging frameworks should be subject to rigorous review to ensure that they include the necessary legal authorities to effectuate the Key Attributes.
- Authorities should also carefully evaluate potential interactions involving the simultaneous resolution of a CCP and one or more of its participants.

4. **“SILOING” CLEARING SERVICES.** The siloing of clearing services, through limitations on clearing participant recourse to each service’s specific default waterfall, can be a potentially important contagion risk mitigant. However, when considering a CCP’s resolution plan, authorities should carefully analyze the structure of the CCP’s siloing arrangements, in light of any applicable legal constraints, in order to ensure that it presents a credible strategy for achieving the objectives of resolution, including the avoidance of contagion or other destabilizing, second order effects.

5. **RESOLUTION TOOLS.** Resolution authorities should have the authority, in addition to the authorities specified in the relevant statutory resolution framework, to enforce any recovery tools or measures that are specified in the CCP’s rulebook and were not fully utilized during the CCP recovery phase.

- However, the utilization or enforcement of any recovery or other tools in resolution should not:

- impair the effective resolution of a CCP;
- further destabilize the CCP; or
- violate the express protections and entitlements afforded to clearing participants under CCP rules.

- In addition, attention needs to be given to the definition of the appropriate counterfactual for purposes of applying the ‘no creditor worse off’ (“NCWO”) principle in resolution.
- In the event of the exercise of assessments/ cash calls, partial tear-up, variation margin gains haircutting (“VMGH”) or any other recovery tool that allocates losses to non-defaulting clearing participants, the CCP or another entity in resolution should be required to fully compensate the affected clearing participants through the issuance of a debt instrument eligible for bail-in in resolution. This compensating instrument (if not bailed into equity) should be repayable via recovery on the CCP’s claims against the estate(s) of the defaulting CM(s) and future CCP revenues/profits.
- Authorities should carefully evaluate whether, and consider appropriate means to avoid or address any circumstances in which, the exercise of a resolution tool might interfere with the status of affected contracts under a qualifying master netting agreement, which could significantly increase clearing participants’ exposures to the CCP and associated capital and margin requirements.

- The decision whether to exercise any resolution tool should consider the effectiveness of the tool in achieving resolution objectives, its potential impact on clearing participants and financial stability and other potential risks. Under no circumstances should initial margin (“**IM**”) haircutting (“**IMH**”) be permissible in CCP resolution (or by CCPs as a recovery tool).

6. **CCP FUNDING AND RESOURCES.** The funds required to facilitate resolution are likely to be significant. Therefore, it is important to consider and anticipate the funding that may be required, whether circumstances dictate an orderly wind-down or continuity (through resolution).

- In the case of continuity, it is important to ensure that the CCP will have in place the appropriate levels of capital and operating resources to fund its operations through resolution, and regulators should consider the need for flexibility to provide temporary relief from minimum default fund sizing requirements or minimum capital or liquidity requirements in the event that such measures are determined necessary to help facilitate resolution, as discussed further in item 7, below.
- Additionally, resolution planning should address appropriate and realistic mechanisms to facilitate the funding, anticipated to be of a short-term nature, of delays and/or shortfalls in the replenishment of the CCP’s default fund to required regulatory levels. The nature and amount of any such replenishment funds/resources must appropriately balance what is needed

to facilitate the continuity of the relevant clearing services against the associated financing cost and not cause the clearing service to become prohibitively expensive for the market, undermining the objective of mandatory clearing. Study and analysis should be undertaken to evaluate alternative approaches for sourcing replenishment resources, including whether it is practicable and potentially more efficient to source the resources at the point of resolution.

- These measures will be important in achieving a successful resolution and should be part of resolution planning by CCPs and relevant authorities.
- CCP resolution regimes should therefore address the sources and thresholds for, and availability of, these CCP resources both before and during resolution.
- Arrangements should be made to ensure that any pre-determined replenishment resources (whether funded by the CCP directly, by its parent holding company, or through third-party investors) will be available to the resolution authority at the point of resolution.
- Relevant authorities should design and implement the operational infrastructure necessary for a public source of liquidity, on a collateralized basis, so that it is operational in the event that the need for such a resource in resolution arises.

7. **LIMITED AND TEMPORARY RELIEF FROM REGULATORY REQUIREMENTS.** Resolution regimes should include the authority to

provide time-limited relief from certain regulatory requirements applicable to the CCP and its clearing participants, where appropriate.

- This might include, for example, temporary relief for CCPs from the minimum default fund sizing requirements or minimum capital or liquidity requirements. Temporary

relief might similarly be appropriate for clearing participants, such as relief from single counterparty credit limits, qualifying central counterparty (“QCCP”) qualification requirements or temporary relief from mandatory clearing requirements, subject to appropriate measures to limit or control the CCP’s clearing risk profile during any period in which such relief is in effect.

III. Discussion

A. CCP RESOLUTION PLANS

Consistent with the Key Attributes, all systemically important CCPs should be required to prepare resolution plans.

1. PREPARATION AND EVALUATION OF PLANS

CCP resolution plans should be prepared by the CCP in consultation with the CCP’s relevant authorities.⁵ As a practical matter, only the CCP has the detailed familiarity with its operations and operational dependencies that is essential to the design of a credible resolution plan. Appropriate authorities, however, should establish the content and other standards for CCP resolution plans and should review, evaluate and make credibility determinations with respect to the plans.⁶ This process should include participation by the relevant systemic risk regulator, the CCP’s supervisory regulator and, if different, the resolution authority in the CCP’s home country.⁷ Authorities should also consider the consequences that may be appropriate in circumstances where a CCP continues to present a non-credible resolution

plan. These could include restructuring, enhanced liquidity, capital or credit support requirements or, in the most serious cases, limitations on clearing activities.

CCP resolution plans must adequately address cross-margining, mutual offset or other risk-sharing or interoperability arrangements in which they participate. Similarly, in developing a CCP resolution framework and a resolution action plan with respect to individual CCPs, relevant authorities must also address the potential for any such cross-margining, mutual offset or other risk-sharing or interoperability arrangements to lead to contagion or otherwise require action with respect to all the CCPs involved in such arrangements. Consideration should specifically be given to the procyclical impacts that may result from the resolution of a CCP that participates in a risk-sharing or interoperability arrangement with other CCPs, for example, through the disruption of netting sets and increases in margin requirements that may result from the termination of cross-margining or similar arrangements.

In particular, resolution planning should be designed to ensure that any prospective disruptions involving these arrangements will not have an unacceptably destabilizing impact. Effective solutions to these issues will be particularly challenging and will require a high degree of inter-agency cooperation in circumstances where the CCPs participating in such arrangements are subject to regulation and resolution by different authorities.

In the case of a CCP that is systemically important in more than one jurisdiction, international coordination with appropriate local regulators, as laid out in the Key Attributes, will be critical.⁸ To accomplish this, each jurisdiction should specify a lead regulator for these purposes and for the purpose of facilitating inter-agency communication and coordination. Any impediments to information sharing posed by privacy or blocking statutes or other laws should be resolved by the relevant legislative or other authorities *ex ante*. In addition, cross-border crisis management groups composed of regulatory officials from all relevant jurisdictions in which a CCP is systemically important should be established.

Generally speaking, CCP supervisory regulators receive detailed information regarding the structure, operations and risk profiles of the CCPs they regulate. This information is generally not available in real time, in the ordinary course of events, to resolution authorities and systemic risk regulators. It is critical that resolution action plans address these informational asymmetries as needed. These should establish agreed metrics and event triggers (covering both CM default and non-default events (as described below)) for reporting purposes. The reporting

framework should be capable of providing an adequate early warning mechanism to support the real time decision-making of authorities tasked with systemic risk and resolution determinations, including determinations as to whether the imminent exercise of any recovery tool by a CCP would be unacceptably procyclical or destabilizing.⁹

2. PLAN DESIGN

CCP resolution plans should facilitate the resolution of CCPs through measures that are designed to maintain the continuity of clearing services, whether on a legal entity or a clearing service basis, either through the CCP, a bridge institution or another third-party successor.¹⁰ These measures should adequately address scenarios involving continuity of all clearing services of the CCP, as well as scenarios affecting only certain clearing services, products or product categories within the CCP.¹¹ Plans should include measures to evaluate, demonstrate and ensure the CCP's legal, operational, regulatory and governance readiness to effectuate the resolution strategies outlined in the plan, while maintaining linkages with other FMI, clearing participants and service providers.

Continuity of clearing services should generally be the preferred default objective of CCP resolution. However, resolution planning should also anticipate the possibility of an orderly wind-down of a CCP's clearing service. Generally speaking, an orderly wind-down should be limited to circumstances in which the CCP or the relevant clearing service is no longer systemically important or the market that it supports no longer requires continuity. It may also be appropriate, however, in instances

where continuity, although desirable, cannot reasonably be expected to be achieved or cannot be achieved without unacceptable consequences for financial stability; for example, where there is no reasonable prospect of achieving a matched book either prior to or in resolution.¹² Another circumstance may arise when, as a result of a CCP's failure, the market has lost confidence in the clearing service to such an extent that, despite new management, CMs prefer to exit the clearing service entirely (whether the CCP is resolved or another CCP succeeds to the clearing service).

In circumstances where a CCP may be subject to an orderly wind-down under a resolution framework and liquidation under another regulatory or insolvency framework (such as the U.S. Bankruptcy Code), the resolution plan should consider and address the potential interaction of the two frameworks.

The need to address clearing service continuity can arise from a wide range of scenarios or events that threaten a CCP's continued viability. It is, therefore, important that CCP resolution plans include appropriate provisions and measures to address resolution scenarios involving both losses resulting from the default of one or more CMs as well as from non-CM default events, such as operational, technology, litigation, custody, investment, infrastructure or similar non-default events ("non-default events").¹³

In order to provide resolution authorities with adequate flexibility in determining the optimal approach to the resolution of an individual CCP, CCP resolution plans should anticipate and credibly facilitate resolution through a single point of entry at a holding (or intermediate

holding) company level, as well as through a resolution at the operating entity level. Resolution at the holding company level has the potential to provide a number of benefits as noted in section 4 below.

3. **TRANSPARENCY**

CCP resolution plans should be made available to clearing participants, both to ensure transparency and informed comment during an appropriate period prior to adoption of, or amendment to, a CCP's plan. Sharing plans will enhance predictability overall, minimize risk in a potential resolution of a clearing member and also provide greater clarity on potential outcomes in the resolution plans of clearing members. Resolution plan disclosure, in this context, should be subject to appropriate redaction of confidential and proprietary content (as determined by the relevant supervisory authority, after consultation with CCPs and clearing participants).

4. **PUBLIC SECTOR PLANNING**

In light of the time and resource constraints that invariably accompany periods of financial instability, it is critical that the appropriate authorities themselves have credible and comprehensive action plans, developed in collaboration with affected peer regulators in relevant jurisdictions, for the orderly resolution of CCPs generally and, where appropriate, individually, as part of the relevant jurisdiction's overall resolution framework.¹⁴

In fashioning public sector action plans for CCP resolution, and in reviewing CCP resolution plans, relevant authorities should also give careful consideration to the appropriate point of entry

for CCP resolution and whether, consistent with the Key Attributes, the legal entity structure of the CCP would facilitate resolution through entry at a holding company or intermediate holding company level (as a potential alternative to entry at the operating company level).¹⁵ While a considerable amount of thought has been given to entry at the operating company or clearing service level, there are a number of considerations and circumstances in which entry at a holding company level may enhance the private sector loss absorbing assets available to the resolution authority, avoid the potential for adverse consequences, such as those described below with respect to close-out netting, and increase the flexibility of resolution authorities in identifying potentially optimal resolution strategies.

B. RESOLUTION TRIGGERS

TCH and ISDA broadly agree with the resolution triggers described in the Key Attributes.¹⁶ As a practical matter, non-viability has been widely accepted as a key resolution trigger. While non-viability is not defined, it does not appear that a specific definition is necessary. The principal consideration is outcome driven: the extent to which the relevant event or development has the real and imminent potential to cause a cessation in the provision of critical clearing services. The nature of the underlying cause, while relevant to the resolution strategy, is not determinative. As a corollary, these evaluations must be made where continuity is threatened either by default losses or by non-default events.

Consistent with the Key Attributes, while non-viability is a key trigger, other triggers can be critical, such as a determination that

the exercise of a recovery tool presents an unacceptable risk of destabilizing clearing participants. In the event that a trigger for resolution is dependent on the occurrence of a CCP default or insolvency event (e.g., the CCP's liabilities exceed its assets or the CCP is unable to pay its obligations as they become due), it is important that the relevant authorities ensure that the trigger is not written in a manner (such as by references limited to "default") that could call the effectiveness of the trigger into question as a result of recovery measures, such as VMGH, tear-up and segment closure/limited recourse provisions, all of which are intended to extinguish obligations of the CCP in order to prevent its default and insolvency.¹⁷

While continuity of clearing services is generally the desired outcome of resolution, it is important for resolution authorities to recognize circumstances in which continuity may not be reasonably achievable or the best outcome.¹⁸ In circumstances where continuity can be achieved only at great cost and risk and a critical mass of CMs determines that, notwithstanding the prospect of a successful resolution, they intend to withdraw from the clearing service imminently, the pursuit of resolution may not be justified by the likely outcome. In the event that a critical mass of an interested constituency is unwilling to continue as CMs, they should be given the option to choose (by way of a special ballot or governance process) the wind-down of the clearing service without being forced to undergo the complex and resource-intensive resolution process. Such an option could alleviate unnecessary strains on clearing participants at a time when many of them may be put at risk by the resolution process itself.

Finally, the decision whether to place a CCP in resolution should be made by the relevant home country resolution authority in consultation with the home country systemic risk regulator and the CCP's supervisory regulator (or, if applicable, the CCP's supervisory college), who is likely to have the most timely and accurate information regarding the financial resources and circumstances of the CCP.¹⁹

C. RESOLUTION FRAMEWORK AND AUTHORITY

Consistent with the Key Attributes, each home and host jurisdiction of a systemically important CCP must establish a resolution framework and a resolution authority that are capable of achieving continuity of the CCP's critical functions in the face of threats to the viability of a CCP.²⁰ Appropriate authorities in each jurisdiction should conduct a rigorous review of the local resolution framework to ensure that the legal framework for CCP resolution applies to, and is adequate for, the resolution of each CCP in the jurisdiction that may become subject to resolution and to ensure that the framework includes the legal authorities necessary to effectuate the Key Attributes.²¹

Any such review must focus on the organizational and risk structure of the relevant CCP (taking into account any inter-CCP linkages), any limitations that may exist under relevant insolvency and liquidation regimes or statutes or other legal provisions affecting the netting, termination, transfer or liquidation of products within the product categories cleared by CCPs in the relevant jurisdiction.

The review must also evaluate the potential

interaction of the CCP resolution framework and the framework(s) for resolution of CCP participants to ensure that any inconsistencies would not undermine or unduly complicate the resolution of either entity.²²

We note that, in the EU, some CCPs are also banks subject to the EU Bank Recovery and Resolution Directive ("BRRD"). In circumstances where a bank CCP whose predominant activity is providing central counterparty clearing services is subject to conflicting resolution regimes, the CCP resolution regime should prevail.

D. "SILOING" CLEARING SERVICES

Arrangements to silo or otherwise segregate clearing portfolios by risk category or product category must not interfere with resolution objectives through second order effects or create risk in other ways. We note in this regard that a number of existing resolution frameworks (at least in the United States and, in some instances, the EU) assume that resolution will apply to a legal entity and not to a division, service, group of contracts or category of activities.²³ However, certain CCPs silo clearing portfolios to create multiple siloed risk pools, in some cases within a common legal entity. Additionally, as a practical matter, events affecting the viability or continuity of a clearing portfolio may variously affect the CCP as a whole, a particular clearing silo, only certain products within a clearing silo or, although somewhat less likely, only certain products, but products cleared in different clearing silos.²⁴

Each of these has the potential to complicate resolution or lead to other unintended adverse consequences.²⁵ For example, if

only certain products within a netting set are subject to resolution, the disruption of the relevant netting sets will eliminate the recognition of risk offsets across the products in resolution, on the one hand, and those that remain in the CCP, on the other hand. This has the potential to significantly increase risk (as well as margin and capital requirements) for the beneficial owners of the affected positions, and could lead to contagion across silos, as well as procyclicality. Similarly, the resolution of a siloed clearing service whose products are cross-margined or portfolio margined with products in another silo that is not put into resolution can create new risk imbalances for the relevant CCP or clearing service, as well as for the beneficial owners of the affected positions.

We additionally note that, in the United States, under the Dodd Frank Act Title II Orderly Liquidation Authority, the resolution authority has the right to repudiate QFCs or transfer them to a bridge or other acquirer.²⁶ This right, however, applies not on a contract-by-contract basis, but across all (or none) of the QFCs between the legal entity subject to Title II proceedings and a counterparty and its affiliates (i.e., all QFCs with all affiliated counterparties within a group must either be accepted in whole or repudiated in whole).²⁷ Thus, in the case of a CCP that houses two or more clearing services in the same legal entity, Title II proceedings would be commenced with respect to the entire entity and all its clearing services – including those whose viability may not be in question – and the resolution authority would have to repudiate or transfer the QFCs of the entity's counterparties and their affiliates across all services on an all-or-none basis. By contrast, in the EU, the BRRD does

not have similar 'all-or-none' provisions. The BRRD allows the resolution authority to 'select' among the QFCs between the entity in resolution and a counterparty to be assumed or rejected as long as netting sets are preserved.²⁸

Where the relevant framework includes the authority in resolution to repudiate or transfer a subset of QFCs within a netting set (like the BRRD), in contrast to a framework that takes an all-or-none approach (like Title II OLA), the exercise of such authority could compromise the recognition of risk offsets across the affected contracts in connection with the computation of a clearing participant's regulatory capital requirements. As a result, it is important that CCPs structure clearing silos to include all contracts for which the CCP permits cross-margining or portfolio margining and that are eligible for treatment by clearing participants as a single netting set for CCP margin and regulatory capital purposes. Segregation on a netting-set basis would preserve the efficacy of portfolio margining while also protecting the remaining silos from the risk of contagion in the event losses are incurred in one silo.

In designing and evaluating resolution frameworks, and in executing their authority, resolution authorities should be mindful of the netting, margining, risk and capital implications of the resolution tools they are authorized to exercise.²⁹ Resolution authorities should not, for example, have or exercise the ability to effect partial property transfers that would break up existing netting sets. On the other hand, subject to the parameters outlined below, resolution authorities should be permitted to use partial tear-up to the extent necessary to achieve a matched book following

a failed or incomplete auction³⁰ where doing so will not be destabilizing, result in the indirect allocation of loss or create disincentives for product risk management in a manner that creates a moral hazard. Additionally, when considering a CCP's resolution plan, authorities should carefully analyze the structure of the CCP's siloing arrangements, in light of any applicable legal constraints, in order to ensure that it presents a credible strategy for achieving the objectives of resolution, including the avoidance of contagion or other destabilizing, second order effects.

E. RESOLUTION TOOLS

1. GENERALLY

As contemplated by the Key Attributes, resolution authorities should be authorized to enforce any recovery tool that was not fully utilized during the CCP recovery phase (subject to the parameters noted below in this section) in addition to the authorities specified in existing statutory resolution frameworks, such as Title II in the United States.³¹ Important additional resolution tools include the ability to:

- impose a limited duration stay on closeout of QFCs;
- accept or reject contracts;
- avoid closing the CCP by appointing a receiver at the holding company level, if the holding company is in danger of default, and accessing additional assets of the CCP group to support and facilitate resolution;
- make liquidity available to facilitate

resolution, subject to appropriate parameters and conditions, on a temporary basis and in anticipation of repayment;

- change management;
- prevent or delay the termination of operating contracts (such as vendor, services and licensing agreements) for a limited period of time, to facilitate operational continuity in resolution; and
- provide access to a public source of collateralized funding.

It is important, however, to ensure that the availability of recovery tools in resolution, or the exercise of any other resolution tool, does not call into question the ability of a clearing participant to enforce closeout netting rights the clearing participant may otherwise have against a CCP. This issue arises because the enforceability of a clearing participant's closeout netting rights upon the insolvency of a counterparty is a precondition to the netting of the participant's exposures to the CCP for regulatory capital, credit risk management and financial statement purposes.³² It is therefore important that resolution tools are structured, or other legal or regulatory accommodations are made, to address this issue.

These concerns could be addressed by ensuring that clearing participants retain the right to exercise their closeout netting rights upon a CCP event of default, including the insolvency or resolution of a CCP, without impairment or delay (other than by operation of stays and overrides of the type found in bank resolution regimes, which are currently

accepted as consistent with the recognition of netting). In contrast, netting recognition concerns could arise if a resolution authority retains the legal authority to impose VMGH on the variation margin gains of a clearing participant in a manner that impairs prompt close-out netting by the clearing participant. (Similar concerns could arise in the context of resolution tools such as partial tear-up.)

A determination by relevant authorities that the resolution authority must retain the authority to exercise resolution tools, such as VMGH and partial tear-up, in ways that could impair netting rights from a regulatory capital, credit risk management or financial statement perspective would be significant. The ensuing obstacles to netting recognition would present significant challenges to the amelioration of the punitive capital, credit limit or financial statement impacts that would result for clearing participants. The importance of avoiding any such adverse netting impacts in resolution is underscored by the policy considerations that underpin the mandatory clearing requirement: specifically, that significant reductions in risk are achieved precisely through the netting of risk that results from CCP clearing.

The exercise of partial tear-up, which has the potential to be destabilizing, should be subject to the following conditions:

- Partial tear-up should be performed on a *pro rata* basis across all clearing participants that have a position on the side of the market opposite to the positions of the defaulting CM (so as to not violate the status of the CCP as a principal, as required by applicable

accounting rules³³).

- Partial tear-up should be required to be priced at prevailing market levels.
- Partial tear-up should not be utilized as a means of loss allocation, but rather as a method to re-establish a matched book.
- While challenging, partial tear-up must not disrupt netting sets, as this could create uncertainty regarding the risk, financial accounting and regulatory capital treatment of affected positions and, in extreme cases cause distress to affected clearing participants.

In the event of assessments/cash calls, the exercise of partial tear-up, VMGH or any other recovery tool that allocates losses to non-defaulting clearing participants, the CCP or another entity in resolution should be required to fully compensate the affected clearing participants through the issuance of a debt instrument eligible for bail-in in resolution. This compensating instrument (if not bailed into equity) should be repayable via recovery on (i) the CCP's claims against the estate(s) of the defaulting CM(s) and (ii) future CCP revenues/profits for the uncompensated replacement costs of torn-up trades and other such losses and payments.³⁴

While resolution authorities should not necessarily be limited to the use of recovery tools in resolution, the exercise of any resolution tools, even those expressly contemplated by the relevant CCP's rulebook, should in all cases be subject to the following considerations and limitations:

- whether the exercise of the tool will be effective in achieving the objectives of the resolution or will impose undue hardships on one or more constituencies;
- whether the exercise of the tool creates an unreasonable risk of financial instability;
- whether CMs can be reasonably expected to anticipate and manage the risk associated with the exercise of the resolution tool; and
- whether the resolution tool would divest a clearing participant of the entitlements and protections provided to clearing participants under the relevant CCP's rulebook. (In addition, further consideration should be given to the definition of the appropriate counterfactual for purposes of applying the NCWO principle when recovery tools that operate to extinguish the CCP's payment obligations are used in resolution, as the use of such tools significantly complicates the NCWO analysis).³⁵

Under no circumstances should any resolution tool expropriate, or impair rights in, collateral (i.e., IM) or assets that were not potentially subject to such expropriation or impairment under CCP rules or applicable law in effect prior to resolution. Resolution authorities should additionally only employ tools in the resolution of the CCP that would foster appropriate incentives for prudent risk management and would not have potentially destabilizing procyclical effects. Resolution authorities should carefully consider moral hazard risks when choosing among alternative resolution tools.

Similarly, resolution authorities should not have the ability to prevent or delay clearing participants from withdrawing from the CCP in accordance with the procedures and requirements specified in a CCP's rulebook. Preventing clearing participants from exercising their rights under the CCP's rulebook would expose them to risks that they may not be able to properly manage and which could have a destabilizing effect on clearing participants and their bank affiliates.

2. IMH SPECIFICALLY

We note in this context that some have considered IM as a potential mutualized resource in resolution. Resolution authorities should not, under any circumstances, haircut (or have the authority to haircut) IM posted by non-defaulting clearing CMs or indirect clearing participants.³⁶ This is important for a number of reasons.³⁷

As a threshold matter, IM is, by an order of magnitude, the single greatest quantum of assets pledged to a CCP. But it is pledged on the basis and understanding that it is available to secure the obligations of the poster (or, in the case of a CM, its customers). Most jurisdictions appropriately limit the use of IM to this purpose, including the United States and the EU. Furthermore, IM, as described above, is not a mutualized resource and therefore should not be available to other creditors in the event of CCP liquidation.

Consistent with statutory provisions in the EU and the United States prohibiting the use of IM to satisfy losses arising from the default of a participant other than the poster (or the poster's customers), IM should not be used either as a CM-default or non-default event loss allocation tool. Using non-bankruptcy

remote IM as a loss allocation measure in the event of CCP resolution may create incentives for clearing participants to gravitate from CCPs that take collateral by way of title transfer towards those CCPs that take non-cash collateral by way of security and without rehypothecation rights. Incentivizing such conduct could increase CCP liquidity costs and exacerbate liquidity risk in a period of market stress. To the extent that some jurisdictions allow IMH and others do not, this may also create competitive disadvantages for CCPs located in the jurisdictions allowing IMH.

3. **NEGATIVE INCENTIVES CREATED BY IMH**

It is also difficult to predict how clearing participants would react to a framework in which such a significant amount of their assets effectively secures the risk of other participants' default. Exposing IM to haircutting could also result in adverse regulatory capital consequences for clearing participants, resulting in a higher risk weight and increasing regulatory capital charges for clearing participants. The increasing cost of clearing and the reduction in the number of highly-capitalized firms willing to act as CMs suggest that IMH would be a negative factor, potentially disincentivizing clearing membership and likely impeding efforts to ensure a broad-based clearing membership.

Additionally, IM haircutting could introduce significant procyclical and financially destabilizing forces as it becomes necessary for clearing participants to obtain and segregate additional high quality collateral to replenish their IM at a time of likely severe market stress, thereby exacerbating, rather than minimizing, systemic risk.

Of equal or greater concern, IMH would incentivize conduct that is squarely inconsistent with the fundamental objectives of resolution (and recovery): to promote continuity of clearing services and foster market stability. Instead, the prospect of IMH would incentivize clearing participants to close out their positions so as to exit the affected clearing service with as much IM as possible. The flight of clearing participants at the earliest stage of market stress will invariably only exacerbate market stress and perhaps foster a crisis that might otherwise have been avoided. It will simultaneously place clearing participants in competition with each other and the CCP for transactions to liquidate or hedge unbalanced positions.

Similarly, the flight of clearing participants at the earliest signs of market stress would complicate efforts to re-balance the CCP's portfolio through an orderly auction process and offset the impact of other incentives for robust participation in default management auctions. In addition to complicating or interfering with recovery, auction failure directly increases the risk to all clearing participants that unfunded CCP losses will be allocated in whole or in part to them.

F. CCP FUNDING AND RESOURCES

The funds required to facilitate resolution are likely to be significant. The availability of adequate capital, operating and liquidity resources is critical to the resilience, recovery and, if necessary, also the successful and orderly resolution of a CCP. As a result, CCP resolution planning should anticipate and account for the resources that will be needed to facilitate resolution (regardless of whether the ultimate goal of resolution is continuity or orderly wind-

down), should the ordinary course resources of a CCP be depleted.

1. CAPITAL³⁸

CCPs should be required to maintain resources necessary to replenish their regulatory capital requirement in an amount equal to (at least) their annual operating expenses.³⁹ Since operating requirements fluctuate over time, the CCP's capital replenishment requirement needs would have to be revisited at least annually. These capital replenishment funds should be held in a manner and under arrangements that make them available for use only by the resolution authority once resolution is triggered and only for their intended replenishment purposes. In circumstances where these capital replenishment funds are sourced from third parties, those third-party obligations should bail in as equity in the resolved CCP or its post-resolution successor. Recognizing that the accumulation of sufficient resources (e.g., from retained earnings or third parties) may require time, CCPs should be afforded an adequate conformance period within which to source the necessary capital replenishment funds.

2. DEFAULT FUND REPLENISHMENT

In order to maintain continuity in resolution, the default waterfall resources, including the default fund of a given clearing service, will require replenishment. CMs are generally required under CCP rules to replenish their contribution to the default fund within a very short time period. However, in the event of a CCP resolution, it is possible that there could be delays in default fund replenishment due to market turmoil, and these delays could impede

the timely establishment of a creditworthy successor of, or a bridge institution for, the CCP. To mitigate against this risk, consideration needs to be given to the implementation by CCPs of arrangements to maintain replenishment resources that could be used to backstop the timely replenishment of the default fund on an interim basis (or any failure of a CM to perform its replenishment obligation).

These replenishment resources could be sourced directly from the CCP, from its parent holding company, or from third party investors, but, either way, arrangements should be made to ensure that these resources will be available to the resolution authority at the point of resolution.⁴⁰ These resources would be repaid to the investors as, and to the extent that, continuing CMs replenish their default fund contributions, or in the event continuity of the clearing service is not pursued.

It is critical that the amount of any such replenishment resources appropriately balance what is needed to facilitate the continuity of the relevant clearing services against the associated financing cost and not cause the clearing service to become prohibitively expensive for the market, undermining the objective of mandatory clearing. Accordingly, thorough study and analysis is required to (i) appropriately size the amount and composition of any replenishment resources that may be required for any particular CCP and (ii) evaluate appropriate and enforceable arrangements to ensure that those resources will be available to the resolution authority at the point of resolution. In addition, study and analysis should also be undertaken to evaluate alternative approaches for sourcing

replenishment resources, including whether it is practicable and potentially more efficient to source the resources at the point of resolution.

3. LIQUIDITY

Finally, the Key Attributes appropriately recognize the possible need for a public source of liquidity in the event of CCP resolution during extreme market stress.⁴¹ The Bank of England provides CCPs (even those that are not registered as credit institutions) with access to central bank liquidity facilities to be accessed in the event of an emergency rather than as part of the business-as-usual operation of the CCPs.⁴² The European Central Bank, while supportive of emergency liquidity access, has left the choice to the central banks in individual member states to determine whether providing liquidity (either on a business-as-usual or emergency basis) is appropriate under their mandates.⁴³

It is important that the central bank infrastructure for such a facility (on standard market terms, including the requirement for high quality liquid collateral) be put in place *ex ante* to assure that it is operational and that such liquidity can be made available when, and if, it is needed in resolution. Relevant authorities should give careful consideration to any circumstances unique to CCPs (such as segregation requirements) that may affect the structuring of such a facility. The failure to have the operational arrangements in place to facilitate such an arrangement when needed could result in significant delays in restoring stability and reducing liquidity strains and could compromise CCP resolution.

G. LIMITED AND TEMPORARY RELIEF FROM REGULATORY REQUIREMENTS

The Key Attributes prohibit the automatic revocation, and instead call for the continuation, of licenses, authorizations, recognitions and legal designations of a CCP in resolution, as necessary for its continued performance of critical functions upon the commencement of resolution.⁴⁴ Regulators should consider the need for flexibility to provide time-limited relief from certain regulatory requirements applicable to the CCP and its clearing participants that are determined necessary to facilitate resolution. For example, a CCP undergoing resolution may need relief from capital or minimum default fund requirements that apply to the CCP in the ordinary course for some interim period of time. During this period, the CCP should be prohibited from materially changing its risk profile (e.g., by materially altering risk, margin and stress testing methodologies, changing netting sets or adding new products or services), unless it is to ensure prudent risk management and has the resolution authority's approval. Other risk mitigants may also be appropriate during this period.

Clearing participants may also require temporary relief from certain regulatory requirements and consequences that are related to the clearing participants' exposures to a CCP undergoing resolution. For example, clearing participants may require time-limited relief from single counterparty credit limit requirements and may require time-limited authorization to continue to treat a CCP in resolution as a

QCCP under the Basel capital framework.⁴⁵

Resolution authorities should also consider the potential need for a temporary suspension of

the clearing mandate for any products affected by a CCP's resolution and temporary relief from the margin requirements applicable to uncleared derivatives where circumstances may warrant it.

IV. Conclusion

The resolution of CCPs presents resolution authorities with significant and unique challenges. The challenges presented by CCP resolution are particularly acute precisely because the most likely (although not exclusive) scenarios in which CCP resolution may be required can be expected to involve a period of unparalleled market stress and instability not limited to the affected CCP(s). The increasing prominence of CCPs within the global mosaic of systemically important actors heightens the need to address these challenges effectively.

Many of the features of, and tools applicable to, financial institution resolution are an appropriate model for CCP resolution. Because of the unique characteristics of CCPs, however, they are not a complete model and do not provide a complete solution.

This paper has attempted to both highlight and endorse the thoughtful principles that have been codified in the Key Attributes and to identify, from the perspective of clearing members and other clearing participants, a number of important, related considerations

that must be addressed in the context of a workable and comprehensive resolution framework for systemically important CCPs.

Certain of the recommendations in this paper, such as those addressing point of entry at the holding company level, and potential shortfalls in the replenishment of the default fund of a CCP that is in resolution, involve issues that raise particularly difficult challenges. TCH and ISDA recognize that more work and analysis is needed to formulate a fully considered and workable solution to these challenges. In these cases, this paper is intended to focus attention on the relevant issues and initiate a dialogue and does not purport to present definitive or comprehensive solutions.

TCH and ISDA welcome the opportunity to work with the official sector and other interested constituencies to address these challenges with a view towards achieving the further mitigation of an important potential source of systemic risk through an effective resolution framework for systemically important CCPs.

Endnotes

- 1 FSB, *Key Attributes of Effective Resolution Regimes for Financial Institutions, Appendix II-Annex 1: Resolution of Financial Market Infrastructures (FMIs) and FMI Participants* (Oct. 15, 2014), http://www.financialstabilityboard.org/wp-content/uploads/r_141015.pdf (references in these endnotes to the “FMI Key Attributes” are references to such Appendix II-Annex 1 and references to “Key Attributes” are to the main Key Attributes document).
- 2 References in this paper to CCPs are intended to focus on systemically important derivatives CCPs, recognizing that many of the principles discussed may also be relevant to derivatives CCPs generally.
- 3 See Jerome H. Powell, Governor, Board of Governors of the Federal Reserve System, Speech at The Clearing House Annual Conference, New York, New York (Nov. 17, 2015) (noting that “over 70 percent of new interest rate swaps and credit derivatives are centrally cleared”)(citing FSB statistics), <http://www.federalreserve.gov/newsevents/speech/powell20151117a.htm>; Timothy G. Massad, Chairman, Commodity Futures Trading Commission, Remarks of Chairman Timothy Massad before the CME Group Global Financial Leadership Conference (Nov. 16, 2015)(“Today, approximately 75 percent of swap transactions are being cleared, as compared to only about 15 percent in 2007.”), <http://www.cftc.gov/PressRoom/SpeechesTestimony/opamassad-34>. In the EU, where mandatory clearing of swaps is not yet in effect, the increase in clearing likely results from the favorable capital treatment of exposures to qualified central counterparties (“OCCPs”) and significant trans-Atlantic swap activity.
- 4 CPMI-IOSCO, *Recovery of financial market infrastructures* (Oct. 2014), <http://www.bis.org/cpmi/publ/d121.pdf> (“CPMI-IOSCO Recovery Paper”).
- 5 If a CCP could be resolved under more than one resolution or insolvency regime, the CCP’s resolution plan should address resolution under each regime and any potential interactions of the two regimes. For example, in the United States, a CCP could be resolved under Title II of the U.S. Dodd-Frank Act (“Title II”) or under the U.S. Bankruptcy Code. Thus, a U.S. CCP’s resolution plan should address both regimes and any potential interactions of the two regimes.
- 6 See FMI Key Attributes 10.3 (requiring that resolution authorities conduct resolvability assessments of FMIs’ resolution plans that should include assessing the “feasibility and credibility of implementing the resolution strategy and operational resolution plan developed for the FMI”); 11.6 (listing content requirements for resolution plans).
- 7 See FMI Key Attributes 11.4 (“Resolution authorities for an FMI should, in cooperation with the FMI’s oversight or supervisory authorities (where distinct from the resolution authority), develop resolution strategies and operational plans to facilitate the effective resolution of the FMI in a way that ensures continuity of the critical functions carried out by the FMI.”); 11.5 (noting that, for FMIs that are systemically important in more than one jurisdiction, the resolution strategy and plan should be prepared by the home authority of the FMI in cooperation with the Crisis Management Group (or equivalent arrangement)).
- 8 See FMI Key Attributes 9 (dealing with cooperation, coordination and information sharing); 11.5 (noting that, for FMIs that are systemically important in more than one jurisdiction, the resolution strategy and plan should be prepared by the home authority of the FMI in cooperation with the Crisis Management Group (or equivalent arrangement)).
- 9 See FMI Key Attribute 12.1 (requiring that FMIs maintain information systems and controls that can make available promptly certain data and information needed by the authorities for resolution planning and resolution).
- 10 See FMI Key Attributes 1.1 (“An effective resolution regime for FMIs should pursue financial stability and allow for the continuity of critical FMI functions without exposing taxpayers to loss, either by restoring the ability of the FMI to perform those functions as a going concern or ensuring the performance of those functions by another entity or arrangement coupled with the orderly wind-down of the FMI in resolution.”); 11.4 (noting that “resolution strategies and operational plans to facilitate the effective resolution of the FMI [should be developed] in a way that ensures continuity of the critical functions carried out by the FMI”).
- 11 See the discussion in Part II.D regarding the siloing of clearing services by risk category or product category.
- 12 See FMI Key Attribute 1.1 (“An effective resolution regime for FMIs should pursue financial stability and allow for the continuity of critical FMI functions without exposing taxpayers to loss, either by restoring the ability of the FMI to perform those functions as a going concern or ensuring the performance of those functions by another entity or arrangement coupled with the orderly wind-down of the FMI in resolution.”).
- 13 See FMI Key Attributes 4.1(vi) (noting that the choice for resolution powers should take into account, among other factors, “the type of the stress . . . and its source (for example, stress arising from participant default or from other causes, such as, business, operational or other structural weaknesses)”).
- 14 See FMI Key Attribute 11.4 (“Resolution authorities for an FMI should, in cooperation with the FMI’s oversight or supervisory authorities (where distinct from the resolution authority), develop resolution strategies and operational plans to facilitate the effective resolution of the FMI in a way that ensures continuity of the critical functions carried out by the FMI.”).
- 15 See Key Attribute 1.1 (noting that resolution regimes for financial institutions should extend to the holding company of the firm, significant non-regulated operational entities of the firm and branches of foreign firms).
- 16 See FMI Key Attribute 4.3 (“Entry into resolution should be possible when an FMI 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 FMI (that do not themselves compromise financial stability). Entry into resolution should be possible, in particular, if: (i) recovery measures available to the FMI, including the use of its available assets and default resources and the application of any loss allocation rules, are exhausted and have failed to return the FMI 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 FMI are not reasonably likely to return the FMI 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”).
- 17 Relevant authorities should take steps to ensure that statutory references in a resolution trigger to a CCP “default” are not frustrated by provisions in a CCP’s rulebook, such as those limiting the recourse of clearing participants to specified assets.
 - 18 See FMI Key Attribute 1.1 (“An effective resolution regime for FMIs should pursue financial stability and allow for the continuity of critical FMI functions without exposing taxpayers to loss, either by restoring the ability of the FMI to perform those functions as a going concern or ensuring the performance of those functions by another entity or arrangement coupled with the orderly wind-down of the FMI in resolution.”).
 - 19 Alternatively, the decision could be made by the home country’s senior finance or treasury official (in consultation with the head of government), upon the recommendation of the systemic risk regulator and the CCP’s resolution authority. See FMI Key Attributes 3.1 (noting that, in carrying out the resolution of an FMI, the resolution authority should observe the “specific objectives of pursuing financial stability and maintaining continuity of the critical functions of an FMI in resolution without losses for taxpayers”); 3.2 (“The resolution of an FMI may be carried out by the resolution authority directly or through a special administrator, conservator, receiver or other official with similar functions.”).
 - 20 See FMI Key Attributes 1.1 (“An effective resolution regime for FMIs should pursue financial stability and allow for the continuity of critical FMI functions without exposing taxpayers to loss, either by restoring the ability of the FMI to perform those functions as a going concern or ensuring the performance of those functions by another entity or arrangement coupled with the orderly wind-down of the FMI in resolution.”); 2.1.10 (outlining the requirements for resolvability assessment for a systemically important FMI).
 - 21 We note in this regard, by way of example, that the CME expressed the view that it is not a “financial company” within the meaning of Title II because it does not derive 85% or more of its revenues from activities that are “financial in nature.” Letter of Kathleen M. Cronin, CME Group to Robert E. Feldman, FDIC (Nov. 18, 2010), <https://www.fdic.gov/regulations/laws/federal/2010/10c22orderliq.pdf>.
 - 22 See generally FMI Key Attributes, *II. Resolution of Participants*.
 - 23 In the EU, resolution frameworks may also apply at the group or branch level. Contrast HM Treasury, Banking Act 2009: special resolution regime code of practice, 13.3, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/411563/banking_act_2009_code_of_practice_web.pdf (contemplating the resolution of a part of the CCP’s business).
 - 24 See FMI Key Attribute 4.13 (noting that the resolution authority should have the authority “to transfer to a third party purchaser or a bridge institution the ownership of an FMI or all or part of an FMI’s critical operations (for example, clearing in one specific product)”).
 - 25 See FMI Key Attribute 11.6(vii) (implying that splitting netting sets should be possible, and requiring that effect of splitting on liquidity and collateral requirements be considered).
 - 26 QFCs typically comprise securities contracts, commodity contracts, forward contracts, repurchase agreements, swap agreements and similar agreements. See e.g., 12 U.S.C. § 5380(c)(8)(D). Contracts of a derivatives CCP with a participant would qualify as QFCs.
 - 27 See e.g., 12 U.S.C. § 5390(c)(9)(A).
 - 28 See e.g., BRRD, art. 76, 77.
 - 29 See FMI Key Attribute 4.2 (“Subject to adequate safeguards, entry into resolution and the exercise of any resolution powers should not trigger statutory or contractual set-off rights, or constitute an event that entitles any counterparty of the firm in resolution to exercise contractual acceleration or early termination rights provided the substantive obligations under the contract continue to be performed.”).
 - 30 See FMI Key Attribute 4.9 (listing loss allocation and contract termination powers).
 - 31 See FMI Key Attribute 4.4 (“Where the FMI has rules and procedures for loss mutualisation or allocation, those rules and procedures should generally be exhausted prior to the entry into resolution of the FMI unless it is necessary or appropriate for achieving the resolution objectives (paragraph 3.1.) to initiate resolution before those rules and procedures have been exhausted. Where any such rules and procedures have not been exhausted prior to entry into resolution, the resolution authority should have the power to enforce implementation of those rules and procedures (see paragraph 4.9 (i)).”).
 - 32 For example, in order to net exposures under derivatives contracts with a CCP for risk-based capital and supplementary leverage ratio computations under the U.S. Basel III capital framework, a clearing participant must establish that the CCP’s rules provide the clearing participant with an enforceable right to close out, on a net basis, all transactions with the CCP and set off related collateral promptly upon an event of default, including upon an event of insolvency, receivership or similar proceeding, of the CCP, subject only to the limited one-business-day stay imposed by certain U.S. resolution regimes, including both the Federal Deposit Insurance Act and Title II, and substantially similar foreign resolution regimes.
 - 33 For a discussion of the accounting issues that may arise, see ISDA, ISDA Accounting Committee White Paper: Consideration of Accounting Analysis for CCP Recovery and Continuity Tools (Oct., 2015), <https://www2.isda.org/functional-areas/risk-management/page/1>.
 - 34 See CPMI-IOSCO Recovery Paper 3.4.7 (noting that FMI

participants may be more willing to share in the FMI's losses if they stand to receive a compensating instrument that is proportionate to the loss they incur).

- 35 See FMI Key Attribute 6.1 (defining the principle that no participant should be worse off as a result of resolution measures than in liquidation as the safeguard that should be observed when resolution tools are exercised). The NCWO analysis is more straightforward in the absence of such tools or in the case of resolution of a CCP's holding company. In such cases, the appropriate counterfactual would be liquidation.
- 36 Contrast FMI Key Attribute 4.10 ("Resolution authorities may write down initial margin of direct participants and, where permitted, indirect participants, where the initial margin is not remote from the insolvency of the FMI and where consistent with the legal framework and the rules of the FMI drawn up in accordance with the legal framework."); 4.11(iii)("[T]he loss allocation [should] apply[] to collateral and margin only to the extent that such collateral or margin would be used to cover losses other than those related to the obligations of the participant that posted them either under the loss allocation rules of the FMI or if the FMI entered into insolvency").
- 37 See e.g., ISDA Letter on IMH (Apr. 17, 2015), <https://www2.isda.org/functional-areas/risk-management/>.
- 38 Some of ISDA's members do not support the statements regarding 'CCP Funding and Resources - Capital' outlined in Sections II.6 and III.F.1 of this paper. While additional funds and resources necessary to replenish CCPs' regulatory capital requirements should certainly be considered in the context of CCP resolution planning, these members believe that these additional resources need to be considered in conjunction with the adequacy of the CCP's capitalization and funded resources. Study and further analysis is required in order to consider potential alternative approaches that may be available to a CCP, including whether it is practicable and potentially more efficient to source the resources needed to replenish the CCP regulatory capital requirements at the point of resolution.
- 39 TCH and ISDA support the establishment of an international standard governing the minimum amount of a CCP's default waterfall contribution (CCP's 'skin in the game') and the priority of its application. Any such standard should be sized in relation to the CCP's default fund (as a measure of CCP risk) and provide meaningful incentives for prudent risk management. TCH and ISDA encourage CPMI-IOSCO to consult the market on this important component of the safeguard and governance structure of CCPs in 2016. Resolution frameworks should additionally address the obligations of CCPs in circumstances where a CCP's skin-in-the-game contribution is depleted prior to resolution.
- 40 Establishment of replenishment resources could be accomplished through the issuance of debt-like instruments to third-party investors, but alternative approaches could also be considered. Investors would be exposed to losses only

to the extent that one or more CMs fail to fulfill default fund replenishment obligations on a timely basis. Any amount of the CCP's obligation to the third-party investors not replenished would bail in to some form of preferred equity or debt in the CCP or its post-resolution successor. As in the case of prefunding regulatory capital requirements and operating expenses, CCPs should be afforded an adequate conformance period during which to raise the necessary funds from the market.

- 41 See FMI Key Attribute 7.1 ("Jurisdictions should have in place appropriate arrangements and powers to provide temporary funding to facilitate resolution and to recover any resulting losses to public funds from the FMI, unsecured creditors (including FMI participants) or, if necessary, participants in the financial system more widely (see KA 6.2 and 6.4)."). Other constituencies have proposed that CCPs should have repo liquidity facilities with central banks in times of stress. See LCH, CCP Conundrums (Dec. 15, 2015), http://www.lchclearnet.com/documents/731485/762444/CCP_Conundrums_An_LCH_White_Paper_2.pdf/.
- 42 See European Central Bank and Bank of England Announce Measures to Enhance Financial Stability in Relation to Centrally Cleared Markets in the EU, <https://www.ecb.europa.eu/press/pr/date/2015/html/pr150329.en.html>.
- 43 See EMIR art. 85(1)(a); see also European Central Bank, Report of the ESCB on the Need for Any Measure to Facilitate the Access of CCPs to Central Bank Liquidity Facilities, <http://www.ecb.europa.eu/pub/pdf/other/genc-2015-escb-reporten.pdf>.
- 44 See FMI Key Attributes 4.6 ("Any licenses, authorisations, recognitions and legal designations of a (domestic or foreign) FMI necessary for the continued performance of the FMI's critical functions in resolution, including its recognition for the purposes of the application of relevant settlement finality rules, should not be revoked automatically solely as a result of entry into resolution under either domestic or foreign law and should remain effective to the extent necessary to allow for continuity of the critical functions of the FMI in resolution."); and 4.15 ("Where functions are transferred to a bridge institution, any licenses, authorisations, recognitions and legal designations of the FMI necessary for the continued performance of those functions in resolution, including its recognition for the purposes of the application of relevant settlement finality rules, should be transferred or otherwise applied to the bridge institution (or institutions).").
- 45 A grace period (of up to 3 months) is contemplated and may be available, under certain circumstances, under U.S. and EU capital regulations, during which clearing participants would be allowed to treat their exposures to a CCP in resolution that does not technically meet the QCCP requirements as exposures to a QCCP. However, the availability and adequacy of these provisions raises a number of issues (such as the treatment of a bridge entity to which the CCP's critical functions are transferred as qualifying for QCCP status).

ABOUT THE CLEARING HOUSE

The Clearing House is a banking association and payments company that is owned by the largest commercial banks and dates back to 1853. The Clearing House Association L.L.C. is a nonpartisan organization that engages in research, analysis, advocacy and litigation focused on financial regulation that supports a safe, sound and competitive banking system. Its affiliate, The Clearing House Payments Company L.L.C., owns and operates core payments system infrastructure in the United States and is currently working to modernize that infrastructure by building a new, ubiquitous, real-time payment system. The Payments Company is the only private-sector ACH and wire operator in the United States, clearing and settling nearly \$2 trillion in U.S. dollar payments each day, representing half of all commercial ACH and wire volume.

ABOUT ISDA

Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has over 850 member institutions from 67 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, clearing houses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the Association's web site: www.isda.org.

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