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September 28, 2012

Paul Tucker
Chair
Committee on Payment and Settlement Systems (CPSS)
CPSS Secretariat
Bank for International Settlements
Sent by e-mail to: cpss@bis.org

Masamichi Kono
Chair
Technical Committee
International Organization of Securities Commissions (IOSCO)
Sent by e-mail to: fmi@iosco.org

Re: IIF Response to CPSS-IOSCO *Consultative Report* on "Recovery and resolution of financial market infrastructures"

Dear Sirs,

On behalf of the Special Committee on Effective Regulation, the Cross-Border Resolution Working Group, and the Infrastructure Working Group of the Institute of International Finance (IIF), the global association of financial institutions, the IIF welcomes the opportunity to comment on the consultative report, "*Recovery and Resolution of Financial Market Infrastructures – Consultative Report*" – henceforth the "*Consultative Report"* – prepared by the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) and issued in July 2012. The IIF commends the CPSS and IOSCO for its consideration of the issues raised by financial market infrastructure (FMI) recovery and resolution, and it welcomes the open and consultative approach taken by the CPSS and IOSCO in this report.

Summary

The IIF's detailed response to the proposals made in the *Consultative Report* is attached to the annex.

The IIF broadly endorses the approach to FMI resolution that the CPSS and IOSCO propose in the *Consultative Report.* It also endorses the goal of maximizing FMI continuity, on a well-understood basis. There are, however, issues on which the IIF makes recommendations or calls for further examination, in the hopes of helping the CPSS and IOSCO to develop a successful resolution framework for *systemically important* FMIs.

i. It would be helpful if the CPSS and IOSCO convened a roundtable meeting of key stakeholders, including systemically important FMIs, major direct participants in FMIs and active indirect participants, to discuss open issues and trade-offs in FMI resolution. A forum such as this would allow the various parties to reach a common understanding on some of the important issues that remain unresolved in the *Consultative Report* and in the IIF's comment letter (e.g., the end-of-the-waterfall procedures).

ii. A more final proposal by the CPSS and IOSCO should draw clearer distinctions between: (a) the normal procedures for loss allocation that FMIs will turn to following a member default; (b) the recovery phase; and (c) the resolution phase. CCPs and other FMIs already have extensive rules and procedures in place to handle loss allocation; because market participants have factored these procedures into their contingency plans, it is important that the FMIs follow these procedures prior to resolution.

iii. The *Key Attributes* may not adequately address all of the issues that need to be considered for FMI resolution, and the CPSS and IOSCO should look at specific FMI issues when developing the principles for FMI resolution. The *Consultative Report* attempts to interpret the *Key Attributes* in the context of FMI resolution, but to the extent that FMIs are unique and different from banks and other financial institutions, this method may not be entirely useful for developing an effective framework.

iv. A more final report should draw clearer distinctions among the various types of FMIs. The IIF agrees that the level of credit risk that an FMI may be exposed to is a useful indicator on which to differentiate the various FMIs. There are, however, different forms of credit risk (e.g., credit risk that results from novating transactions and mutualizing risk versus credit risk that arises directly from credit-based services), and the problems that these different forms of credit risk may pose for resolution aren't addressed or even recognized in the *Consultative Report*. In devising standards that are aimed at maximizing the resilience of FMIs, the CPSS and IOSCO will need to careful not to create too many contingent liabilities; one of the unintended consequences of a system with too many contingent liabilities is that it will create an incentive for members to rush to the exit prior to resolution.

v. The *Consultative Report* does not adequately account for the different types of ownership and governance structures that exist for FMIs (e.g., an FMI may be owned by a public company, a private for-profit company, other FMIs, a central bank, etc.). Nor does the *Consultative Report* consider the implications that these different ownership and governance structures may have for resolution. On a similar point, subsequent reports should specify more clearly the distinction between the systemically important services provided by an FMI and the corporate ownership of an FMI; the primary concern of resolution should be on preserving the former but not necessarily the latter.

vi. The allocation of losses should be spread not just to direct participants but to indirect participants and customers as well, subject to the agreements they have with the direct participants and to applicable regulations.

vii. Another issue overlooked by the *Consultative Report* is the risk of a liquidity shortfall and the specific remedies that should be implemented in case an otherwise solvent FMI faces such a shortfall.

viii. The IIF stresses the importance of predictability, particularly in the context of FMI resolution and the official-sector response. While it is impossible to determine beforehand all of the tools and resources that the authorities may need during the resolution process, there should be a clear "presumptive path" for the authorities to follow.

ix. It is important, in handling the resolution of an FMI that is active on an international basis, that the authorities treat all direct and indirect participants fairly, regardless of their nationality, the location of their claim or the jurisdiction where that claim is payable.

x. Strong cross-border cooperation and coordination, both before and during resolution, are vital to the successful resolution of a failed FMI.

The IIF welcomes the opportunity to comment on the *Consultative Report* and looks forward to further engagement with the CPSS and IOSCO on these issues. Should you have any questions on the issues raised in this letter, please contact Alec Oveis (aoveis@iif.com; +1 202-857-3615).

Very truly yours,

Attachment

Annex: Response to CPSS-IOSCO Consultative Report

General Comments

The IIF made clear in comments on two CPSS-IOSCO consultative reports[1] that it saw the need for CCP recovery and resolution planning as part of its recognition that the post-crisis financial system will require a greater degree of resilience of infrastructure, as well as a credible resolution regime for firms to rebuild confidence and eliminate the economic and political problems of "too big to fail". At a high level, and subject to prior comments, the IIF supports the overall approach of the *CPSS-IOSCO Principles for Financial Markets Infrastructure* (finalized April 2012) ("*FMI Principles*") and the approach to financial-institution resolution of the FSB in its *Key Attributes of Effective Resolution Regimes for Financial Institutions* (2011) ("*Key Attributes*").[2] Thus, the Institute, through the Special Committee on Effective Regulation, the Cross-Border Resolution Working Group, and the Infrastructure Working Group, offers the following comments in hopes of furthering the major goals of CPSS-IOSCO for international convergence on this important topic.

Need for a roundtable of stakeholders. Given the preliminary nature of the discussion in the *Consultative Report* and the complexity of the issues, on which industry thinking is still evolving, the comments and suggestions made here are necessarily tentative and subject to further development. The Institute further suggests that, once the CPSS and IOSCO have had the chance to consider all comments received, they convene a roundtable of stakeholders (systemically important FMIs, firms that are active direct participants and major indirect participants or underlying customers) to talk through the issues before issuing a more final proposal of principles on this topic.

Need for clearer distinctions. A recurrent theme in these comments is that operative proposals need to distinguish more clearly between (a) normal operations including application of member default procedures; (b) the recovery phase; and (c) the resolution phase. Lack of clear delineation of these phases has caused some confusion and will be very important to getting to operative principles that provide clear guidance to FMIs and stakeholders alike.

Similarly, there is a clear need to distinguish an "FMI" in the sense of an *infrastructure system* that provides a given suite of services from the *corporate structures* that hold the ownership and provide the operation of each FMI. Being clear on this point will help resolve some of the ambiguities in the present discussion and lead to clearer international principles. These comments refer to FMI in this sense: the term "FMI" is to be understood as a system that provides certain services subject to specific risk-management and operational requirements; a given owner may hold several FMIs.

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[1] "*Guidance on the application of the 2004 CPSS-IOSCO Recommendations for Central Counterparties to OTC derivatives CCPs*" and "*Considerations for trade repositories in OTC derivatives markets*"

[2] See IIF, *A Global Approach to Resolving Failing Financial Firms: An Industry Perspective*, May 2010, Section 2; IIF, *Making Resolution Robust – Completing the Legal and Institutional Frameworks for Effective Cross-Border Resolution of Financial Institutions* (June 2012).

Specificities of FMIs need more recognition. There is a basic strategic question that the CPSS and IOSCO will need to focus on in preparing a more final set of recommendations: the present draft focuses on "*how the Key Attributes apply to the recovery and resolution of FMIs"*. As will be pointed out in this discussion, this approach risks looking at the recovery and resolution of FMIs through the prism of the *financial-institution* resolution regime rather than pointing the analysis toward the special issues of FMIs. Whereas the issues relating to systemic importance, service continuity and the like are similar to those relating to banks, the *Key Attributes* can be no more than guidelines in the very different context of FMIs. When a bank fails, the primary cause of systemic disruption is credit loss; when a CCP fails, the primary cause is disappearance of trades, unbalancing of trading books, and disruption of risk management across the market.

While the *Key Attributes* in some respects provide useful structure, the issues of FMIs are quite different, and any final document should make sure that the differences between banks and FMIs and *among FMIs* are adequately accommodated. This would be in line with the acknowledgement in **paragraph 1.5** of the *Consultative Report* that it covers a broad range of FMIs.

As discussed further below, the *Consultative Report*'s distinction between FMIs that do and do not take credit risk is important, but there needs to be more differentiation between those that take credit risk by novating transactions or otherwise mutualizing risk and those that offer other sorts of credit-based services, which may be fully collateralized.

Greater focus needs to be given to traditional CSDs, which are not exposed to their participants and which are usually constructed in a way that prevents insolvency (by strictly limiting their liability for any claim and protecting themselves further through external insurance).

It is of further concern that not all types of FMI seem to be included in the current discussion. For example, execution venues mandated by international derivatives reforms, including multilateral trading venues (MTFs), electronic communications networks (ECNs), and exchanges, appear to be overlooked, yet CCPs, depositories, payment systems and market participants are highly dependent on these institutions for critical data.

Distinctions of ownership and governance The range of FMIs includes not only a spectrum of different types of services, with greatly varying credit and loss-distribution issues, but also a spectrum of different ownership and control structures, which also affects substantially the issues that would come up in the recovery or resolution of an FMI. There may be distinctions between the owner and the operator of each specific FMI and the FMI itself. Ownership may be in a listed company, a private for-profit company, mutual ownership (whether or not formally on a for-profit basis), public ownership by a central bank, etc. Moreover, each FMI may be organized in different ways in its ownership group, with sister FMIs, upstream FMIs of other types (such as exchanges) in the chain of ownership, and with varying degrees of corporate and risk independence of FMIs within the same corporate structures. Credit risk may be taken within the FMI, through an associated bank, or independently of the FMI (which may take no material credit risk).

Critically, FMIs all raise intense governance issues with their participants. These are numerous even for a settlement system with no credit risk: the participants in such a case are highly interested in the rules of the FMI and their fair and efficient administration, the clarity and legal certainty of its settlements, the integrity and reliability of the FMI's systems, and the costs it charges.

Where the system acts as a central counterparty, such issues are compounded and participants have an acute interest in the suitability of products for clearing, which products to accept, capital that the FMI itself ought to carry, margin and collateral requirements, the conditions under which risks may be mutualized, and the overall fairness and transparency of its arrangements. In such cases in particular, there is typically a formal process to represent the interests of clearing-fund members, and it must be recognized that there may be conflicts of interest (or simple differences of view) between the participants and the owner and operator of each FMI.

While the CPSS and IOSCO are clearly aware of all these variations, it is not always clear that the *Consultative Report* takes them sufficiently into account. Focused attention to all of these differences will be essential to building a clear and successful recovery and resolution regime on the basis of principles yet to be proposed.

Continuity of services. The *Key Attributes* have the goals of avoiding systemic disruption, interruption of essential services, and losses to taxpayers. The *Consultative Report* acknowledges that "[f]or an FMI in resolution, the highest financial stability priorities for the authorities will usually be to preserve the continuity of the FMI's critical operations and services" and that "[t]he primary object of this statutory manager, administrator or conservator would be to ensure the continuity of critical services". The Institute commends the presumption should be in favor of continuity of systemically important FMI services as essential market infrastructure on a fair and transparent basis, but allowing for change of management and appropriate disposition in resolution of the corporate structure or other businesses of an FMI's owner or operator, and for exceptions that may be appropriate for smaller, product- or jurisdiction-specific FMIs that could be closed without systemic consequences, or for cases where replenishment is simply not possible.

Given the definition of "FMI" used in these comments, it is important to stress that this presumption applies to important FMI services as such and not to the corporate ownership structures of specific FMIs, which should be put into resolution in appropriate circumstances. It will be necessary to recognize that all these issues come up in different ways for different types of FMI services and with different ownership and control structures, and care must be taken to avoid straitjacketing solutions that may or may not be appropriate in different contexts.

A related basic and highly important point is that the more liability or potential losses for participants that an FMI, especially a CCP, presents in its operational models and rules, the more inherently unstable it will be, and the more instability there will be in the system. Where liabilities and losses at the end of the waterfall for participants in a system are in some sense unlimited or unquantifiable, the way firms manage such risks is by resignation from the system when the risk begins to appear too great. In the same way that depositors have an incentive to run if they are uncertain about their potential losses, participants in such systems

may have an incentive to rush for the exit if they would be subject to unpredictable losses. Any such rush for the exits would, of course, exacerbate any deteriorating situation. Conversely, maximizing predictability of outcomes and losses will tend to act to reduce incentives to run. This fact should be kept in mind when devising standards on FMI resolution, to avoid unforeseen, unintended consequences.

Involvement of Indirect Participants and Underlying Clients. In addressing the issues of different types of systems, it will be necessary to address the sometimes thorny issues of allocation of losses to indirect participants and underlying customers, as well as to sorting out ownership and control questions in either the recovery or the resolution. It is essential to point out that the issues and the dynamics of the appropriate exposures of indirect participants and underlying customers are changing as the markets move toward clearing more products, concentrating more products in CCPs, and providing more segregation of customer assets, in line with G20 and FSB mandates. Furthermore, regulatory and market changes in many countries are radically changing the role of firms in such markets, with the effect that they will less often be acting as principals and the overall business in many products will be more customer-driven than was the case a few years ago. Among other things, clients will have more influence in choosing the way in which assets are held and the systems through which many products are cleared.

For these reasons, it is unrealistic to think that indirect participants and clients can be shielded from losses, although the specifics of down-streaming loses to indirect participants and clients can and should (for present purposes) be left to agreements of direct participants with them and to relevant conduct-of-business regulations applicable to such relationships. These are issues that require extensive debate and raise many questions that are not appropriate to be decided in the drafting of standards on *recovery and resolution* of FMIs.

Systemically Important FMIs. While the point is implied at several places in the *Consultative Report*, it should be made clear that the recommendations that the CPSS and IOSCO will make, like the *Key Attributes,* are mandated to be applicable to FMIs determined to be systemically important by their relevant authorities. Although it might make sense for national authorities to have discretion to apply them to other FMIs, the CPSS-IOSCO mandate should only be required for systemically important institutions, especially in countries where legislation along the lines of the *Key Attributes* has already been enacted. It is important for resolution to be a remedy of last resort because (a) the potential that public funds may have to be temporarily used in connection with the resolution, and (b) stakeholders' property and other rights could be significantly and adversely affected without many of the procedural protections that would be afforded them under otherwise applicable insolvency laws.[3]

Predictability. These comments will stress at several points the importance of predictability of an official-sector intervention in the recovery or resolution of an FMI. Given widespread market dependence on FMIs and substantial exposures to default fund, maximizing predictability of exposures and outcomes should be a high priority, among other things to facilitate going-concern risk management of FMIs and their members, and market

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[3] Cf. the Orderly Liquidation Authority ("OLA") provisions in Title II of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act and H.M. Treasury*, Financial Sector Resolution: Broadening the Regime* (August, 2012) (the "HMT Paper").

efficiency as well as stability. Predictability is one reason for the clear distinctions that this note has already called for between going-concern default procedures, recovery, and resolution, and for making clear the limitations to be observed upon any official intervention. As already noted, predictability is essential to maintaining confidence in an FMI and avoiding any incentives to head for the exits in an adverse cycle. While it is understood that the details of official intervention, especially in the resolution phase, cannot be determined in advance, there is a strong case for making the "presumptive path" in recovery and resolution situations as clear as possible.

Cross-border Resolution and Non-discrimination. Strong cross-border cooperation and coordination, both before and during resolution, are essential to the successful resolution of a failed FMI. The CPSS, IOSCO and FSB should reach beyond what it provided for in the *Key Attributes* and recommend the adoption of a substantive international mandate that would be relied upon in the wake of a crisis. The IIF's vision for a comprehensive cross-border solution to recovery and resolution planning is described in more detail in the recent report, *Making Resolution Robust – Completing the Legal and Institutional Frameworks for Effective Cross-border Resolution of Financial Institutions.*[4]

In addition, there should be objective, non-discriminatory protections in place in each jurisdiction to ensure that all participants are treated fairly, regardless of "their nationality, the location of their claim or the jurisdiction where it is payable," as required by Key Attribute 7.4. These protections should apply not only in the resolution process but also to the loss allocation procedures that occur prior to resolution.

Note: *the structure of the* Consultative Report *is somewhat repetitious. These comments follow that structure, but try to minimize the redundancies.*

Section 1. Introduction – Paragraphs 1.1 – 1.7

Paragraph 1.4 states that "*The purpose of this report is … to outline … a common understanding of FMIs' recovery and resolution in all relevant jurisdictions, and a common interpretation of how* the Key Attributes *apply to the recovery and resolution of FMIs. This report does not, however, provide a comprehensive analysis of, or solution to, all the complex and wide-ranging issues that apply to the recovery and resolution of FMIs. Instead it presents a number of questions, and seeks views on the alternative ways in which these issues can be addressed.*"

Given the large number of questions left open, it is difficult to assess the approach as a whole and whether it would be sufficiently detailed and common across jurisdictions as to promote the consistency that the CPSS and IOSCO call for. Therefore, the Institute advises that, when the CPSS and IOCO revise the present report (presumably *after* the roundtable suggested above) to make more specific recommendations, that subsequent report also be put out for comment by the industry and the public. As noted above, it would be well to have an open discussion of well-informed stakeholders before publishing such a subsequent report.

[4] http://www.iif.com/download.php?id=vVrz1cqvQzI=

Section 2. Relationship and continuity between the ***Key Attributes*** and the ***Principles***

FMIs that operate as clearinghouses or CCPs have their own procedures to deal with the default of a clearing member that should be sufficient in most circumstances. Thus the *Consultative Report* is correct in pointing out the importance of each FMI's responsibilities in **paragraphs 2.2 and 2.3**; however, it is not as clear as it might be in the document that the *normal operation* of a CCP's procedures for dealing with a default by a participant should be distinguished from the *"recovery"* process that might need to be triggered when such procedures do not work as anticipated, perhaps because of the failure of multiple participants or other extraordinary circumstances. Furthermore the distinction between recovery and resolution also needs to be maintained (taking into account the specificities of FMIs). *Where the default procedures work as they are supposed to* (which has been true in the vast majority of instances), *the FMI is in a normal operating mode* and, while supervisors certainly need to be made aware of developments in such situations, this should not be understood as triggering "recovery".

Furthermore, with respect to both recovery and resolution, the role of the authorities upon intervention is different than intervention in a financial institution. Especially where the problem arises from a member default, an authority intervening at either the recovery or resolution stage should assure the efficient and effective implementation of the FMI's rules, without deviation from the rules for distribution of risks or losses, for reasons discussed further herein. This is important for creating clear expectations that are necessary to sustain FMIs' operations in normal times as well as in critical situations.

An FMI may also face a number of other types of events that could trigger resolution, in addition to the default of a member (primarily an issue for CCPs). These could include fraud, investment or business losses, or serious operational breakdown. For such issues, FMIs should have appropriately tailored contingency plans, with appropriate back-up facilities and the like, all of which are closely discussed with the relevant supervisors as a matter of course. The operation of the normal contingency plan should not be seen as triggering "recovery" as such, although its failure to provide an adequate solution probably would trigger "recovery". (As discussed further below, it is important to distinguish solutions to problems arising from member default from those arising from operational, IT or financial failure that would be the responsibility of the owner or operator of an FMI.)

Paragraph 2.4 also points out quite rightly the significant cross-border issues that arise, which are addressed further with respect to **Section 5** below. Effective, decisive cross-border coordination will be essential in such cases.

Paragraphs 2.5 and 2.6 call for FMIs to trigger their own recovery plans but leave a substantial degree of discretion for the authorities to intervene in remedial measures. "*…[A]n FMI's execution of relevant recovery measures may be suboptimal in terms of timeliness, judgment or discretion. … In such cases, the relevant authorities should have the necessary powers to require implementation of recovery measures and drive optimal execution.*"

As for other financial institutions, the triggers of intervention in recovery (and resolution) situations should be as predictable as possible because of the need of the market

for clarity. Although this issue comes up differently for FMIs, clarity and predictability of loss is if anything more important for the failure of an FMI, and **paragraph 2.6** tends to blur the recovery/resolution distinction. It needs to be made clearer that any early intervention pursuant to **paragraph 2.6** should be limited to providing guidance or otherwise assuring the effective operation of the FMI's own procedures. Operation of powers beyond that is likely to cross the boundary between recovery and resolution.

FMI difficulties would probably come up suddenly, with little forewarning. It is most likely that the principal indicator for intervention for FMIs would be the FMI's own assessment that either it does not have or predictably will not have the resources to meet its obligations, or that it is has suffered a catastrophic operational breakdown.

The systemic implications of an FMI problem are also likely to be greater. H.M. Treasury argues at paragraph 3.17 of its consultative paper for a public-interest test for exercise of "stabilization powers" to prevent cessation of critical clearing services. But, even if so, as discussed at several points in these comments, it is important that intervention by the authorities, especially in the recovery phase, nevertheless *not* override the operation of the processes and the application of financial resources as provided by the FMI's rules. The stabilization powers foreseen by H.M. Treasury at paragraphs 3.19 and 20 of its paper extend to intervention to stop the closure of a business line if required to limit exposure to members. Use of such powers would appear almost necessarily to move the process into the "resolution" realm and it would be essential to focus on the issues arising from such extensive intervention (including resolution finance), as discussed further below.

Paragraph 2.8 is correct in requiring a sound legal basis for FMI recovery and resolution measures, and in seeking to ensure the timely completion of payment, clearing and settlement obligations, even on the day that an FMI enters into resolution (or any intervention related to recovery occurs); however, the reference to "restoration of the FMI's ability to provide those services as a going concern" seems to create an ambiguity between recovery and resolution: if it is resolution that is intended, then (a) the distinction between the FMI and its corporate envelope discussed above needs to be considered, and (b) in the normal case, the consequences of putting the corporate entity into resolution should apply (*viz.* there should be a change of management and board; in appropriate cases, the ownership of the FMI should change as discussed further below, the corporate shell may need to be liquidated, etc.). Thus, the continuation of the FMI as an infrastructure service should not be conflated with the continuation of its corporate envelope as a "going concern", as discussed further at several points herein.

Paragraph 2.9 appropriately notes that primary responsibility lies principally with the home resolution authority in cooperation with other relevant authorities; however, it also says that "*Authorities should review the plans with the FMI to the extent necessary, but they may decide not to disclose them, or parts of them, to the FMI.*"

The latter statement is troubling. Confidential discussion of recovery and resolution planning with each FMI should be expected, except perhaps for the final decision-making process about pulling the trigger in a specific situation. This is particularly important for FMIs, where the FMI itself is likely to have by far the best command of the technical and credit issues, facts, circumstances, and operational constraints that would need to be

understood in order to come up with a sensible recovery or resolution plan, and to evaluate their feasibility.

Moreover, the consultation process should involve not only the FMI itself (or its operator) but also (depending on the structure of each FMI) its participants that have contributed to the default fund or other participants that would be exposed to financial or operational losses if the FMI got into trouble, either through operation of loss-mutualization procedures or because of operational dependencies.

Note that Responsibility C of the final *FMI Principles* states that "Authorities should publicly disclose their relevant policies with respect to the regulation, supervision, and oversight of FMIs". There does not seem to be an exception for recovery policies. While it is appropriate for the authorities to keep some range of discretion about intervention or triggering resolution, the general bias for predictability should apply to mandate disclosure of at least general plans.

Paragraph 2.10 on cooperation and coordination with other authorities calls for ex ante and "in the moment" cooperation and coordination between "*(a) an FMI's regulator, supervisor or overseer, (b) an FMI's resolution authority (if it is different from the FMI's direct supervisor, regulator or overseer) and (c) other relevant authorities, including resolution authorities of the FMI's participants and relevant authorities for the markets that the FMI supports*."

This paragraph appropriately raises the issue of international cooperation and coordination, which is addressed more fully in the discussion of **Section 5** below. However, two important issues need additional attention:

First, it will be important to include in the sphere of cooperation the relevant authorities for the *principal currencies* treated by the FMI. Including multiple currencies in FMI operations will be vital to market efficiency and also to achieving the risk-reducing potential of many FMIs, but, at the same time, it is clear that products in a given currency that are treated in an FMI outside of the home jurisdiction of the currency will raise concerns with the authorities governing that currency, and a strategy should be devised to assure due consideration of their issues. Not doing so may constrain their willingness to permit processing of products and currencies in a given FMI, with a danger of fragmentation of markets and supervision if such issues are not resolved.

The confidence-creating function of cooperation should therefore always take into account the currencies affected and the regulators of the most relevant products. Note, however, that this issue will not arise in the same way for all FMIs. The issues where an FMI provides novation and central-counterparty services would be quite different from an FMI providing settlement services, trade repository, or other, more limited services.

Second, while it is clearly important that the prudential and regulatory authorities governing material participants in a given FMI be informed of its default procedures and recovery and resolution planning, their interests are clearly different from the interests of the direct regulators of FMIs and of the relevant products in a given market; therefore, consultation and cooperation procedures need to be tailored, on the one hand, to assure full information of all concerned, and, on the other, to avoid decision-making groups from

becoming too large and unwieldy. It would be most helpful if the CPSS and IOSCO could establish clear procedures for such processes.

Section 3: Recovery and resolution approaches for different types of FMI

The *Consultative Report* recognizes the range of different types of FMIs, and there is a sharp line drawn between FMIs that "take on credit risk" and those that do not (**paragraphs 1.5 and 3.2**). This distinction is clearly fundamental. Many types of FMIs provide vital services that do not include taking on credit risk (e.g., a simple securities settlement system or a trade repository), and their resolution issues will be quite different from those of other FMIs.

While it is acknowledged that there is a spectrum of potential types of credit exposure, the discussion might benefit from a fuller analytical exposition of different types of credit exposures that FMIs may take. The discussion focuses on those "whose principal function involves assuming credit risk" such as CCPs, certain SSSs, and deferred net settlement systems that provide settlement guarantees, and that is appropriate; however, for purposes of clarity of establishing recovery and resolution principles, it might be useful to provide further categories, such as FMIs that provide cash advances or securities lending for settlement purposes, and to subdivide such categories into cases where the credit risk is taken by an associated credit institution, as opposed to by the FMI directly.[5] Furthermore, an FMI may itself be organized legally as a bank, but such FMIs raise different issues for recovery and resolution from banks, regardless of the form of organization or licensing and in most cases an FMI should be treated for recovery and resolution purposes as such, and not as a bank.

The specific circumstances of different FMIs need examination as well. CCPs for derivatives present different issues from settlement systems, especially where there are competing CCPs covering the same products. On the other hand, a single SSS (or CSD) for a whole market poses other issues, and requires other provisions. It will be especially important to focus on recovery and resolution planning for the latter to assure legal finality of settlements through the DVP process, perfection and enforcement of rights over collateral in the system, continuity of operations, and access for linked FMIs as well as participants to vital information and processes.

These observations lead to the basic point that each FMI needs to be analysed for its own structural and risk issues, and that the laudable attempt to devise general principles should not be allowed to obscure the need for specially tailored solutions for FMIs, which are more varied and therefore less appropriate for the categories of solutions as postulated by the *Key Attributes*. While it would be complex and perhaps not necessary for the CPSS and IOSCO to develop principles for individual types of FMI – CCPs, SSS, CSDs, net settlement systems, Systemically Important Payment Systems and TRs – it might be useful to provide further guidance to national oversight bodies about how to tailor such approaches to the specificities of each FMI in a way that still results in globally consistent outcomes.

[5] Most FMIs probably take on some credit risk for fees and incidentals, but such exposures can be disregarded for present purposes.

As will be discussed further, recovery and resolution issues of FMIs are influenced not only by the nature of their credit and other exposures, but also by their ownership and in particular whether they are privately owned, part of wider corporate groups, mutually owned by participants, or publicly owned or operated (e.g., by a central bank), and also by their governance structures, which require that recovery and resolution take into account the rights and responsibilities of default-fund participants as well as the rights and responsibilities of management and shareholders or corporate owners of an FMI, where different (e.g., if the FMI is a subsidiary of another entity).

Finally, a general caveat: care should be taken to devise proportionate solutions that do not unduly create incentives to restrict credit and make the efficiencies that FMIs are set up to provide more difficult to realize.

FMIs that do <u>not</u> take on credit risk: Recovery

Paragraphs 3.3 and 3.4 are correct in stating that "All FMIs, including those that do not ordinarily assume credit risk as a principal in performing their functions, may be vulnerable to financial problems that necessitate recovery or resolution" and that "all FMIs need recovery plans to manage circumstances in which these reserves prove inadequate". All FMIs are subject to operational and IT risk, and to business risk if their business models turn out to be non-viable or if financial requirements are not recognized or not properly managed.

Because of the dependencies that firms and markets have on FMIs, including those that do not take large amounts of risks onto their balance sheets, it would be well to mandate that all FMIs include in their recovery and resolution planning processes an *appropriate role for participants*. Including participants will help identify issues, improve planning, help participants themselves with contingency plans in case of a problem with an FMI, and avoid surprises if recovery or resolution measures need to be implemented. This is the corollary to the observation that participants' obligations must be clear and legally binding.

FMIs that do <u>not</u> take on credit risk: Resolution

To apply Key Attribute 3 to FMIs (see **paragraphs 3.5-7, 4.5**), the Report defines the point of resolution intervention in an FMI as the point at which, *"(a) the FMI's recovery plans have failed or have not otherwise been implemented in a timely manner; or (b) the relevant authority determines that recovery plans will not work, no further remedial action is feasible and the FMI needs to be placed into resolution immediately*." Subject to the discussion above with respect to **paragraphs 2.5 and 2.6**, this is an area where FMIs pose somewhat different issues from other financial institutions, and where the trigger of resolution is appropriately more judgmental, given the importance of continuing FMI functions.

Paragraph 3.6 states that there are "*often few (if any) substitutes for alternative service providers"*. This statement may indeed "often" be true, but should not be assumed to be true. For certain products, transfer to another FMI handling the same or similar products may be feasible, or a cross-border solution with a provider of similar services in another country may also be appropriate. Nothing should be ruled out at the level of principles. As discussed further below, the FSB, CPSS and IOSCO should make it part of their program to remove

obstacles to such transactions, especially legal obstacles that could be addressed through internationally consistent legislation in relevant jurisdictions.

- **In what circumstances and for what types of FMI can a statutory management, administration or conservatorship offer an appropriate process within which to ensure a continuity of critical services?**

While the CPSS and IOSCO are well aware of the fact, it is important to stress the need for expedited resolution as opposed to traditional insolvency or bankruptcy practice for a systemic FMI. It is difficult to think of a systemically important FMI where expedited resolution procedures, with the ability to step in and take decisions very quickly, typically over a weekend, would not be necessary. As is amply recognized in the *Key Attributes*, traditional processes are not suited to the kind of immediate action that is required to preserve value in financial crises, and that is all the more true of systemic FMIs. Therefore, the powers and procedural requirements would be quite different from the classic insolvency administration.

The additional powers and objectives of an administrator or similar body for an FMI would include the specific and overriding objectives to ensure at least temporary continuity of services and, subject to analysis of the requirements of a particular situation, the immediate release of unencumbered assets held in the FMI, to contribute to continued market liquidity.

- **Are there powers beyond those of a standard insolvency practitioner that a statutory manager, administrator or conservator would require in these circumstances?**

As already stated, any such officer (or other resolution authority) for a systemic FMI should be entitled to act administratively as required to implement the new resolution regime proposed by the *Key Attributes*, rather than through the traditional bankruptcy practice. As with the application of recovery measures, any administrator or similar officer or resolution authority should have the right but also the obligation to consult with participants about measures to continue the functions of the FMI, insofar as practicable given time constraints. In many cases, the officer or resolution authority would be taking over the functions of the owner or operator of the FMI but would be well advised to continue to involve participants in accordance with the FMI's established procedures.

Such an officer or resolution authority would be expected to see to enforcement of the failing FMI's published rules, including with respect to recovery and resolution issues. The rights and roles of participants should continue insofar as the systemically important services of the FMI continue to be provided. Because of the importance of predictability of firms' obligations to the FMI, the officer or resolution authority should not have the right to vary the rules.

Similarly, any transfer of the FMI should be done under circumstances in which participants' rights and obligations, and the legal status of transactions or information held within the FMI, would not be substantially varied.

Generally, difficulties of an FMI not accepting substantial credit risk would be expected to be caused by operational or business failures, not by problems arising from mutualization of risk. That being the case, it should not be expected that participants would be obliged to contribute financially to a recapitalization and relaunch of the systemically important services of an FMI. Therefore, the officer or authority would be expected to take control of all the resources of the FMI, including those provided by the operator and owner (as discussed further below with respect to equity issues). If additional resources were required, it would be appropriate to seek them from participants in exchange for new or revised ownership or governance rights, but it would not be appropriate to compel such contributions.

FMIs that take on credit risk: Recovery

Paragraph 3.8 describes in general terms the exposure of certain FMI systems to their participants. The point already made in the introduction to this discussion is worth repeating: such systems have extensive and well-thought-out default procedures that anticipate a wide array of possible events and which should cover most imaginable member default situations, including mutualisation of substantial losses. Such procedures are required for relevant FMIs by the *FMI Principles*, as noted in **paragraph 3.9.** It is of course necessary to plan for recovery or resolution in the extreme case where such procedures might not work, but it should also be kept in mind that the norm would be to allow an FMI's default procedures to run their course, and for the FMI and its participants to resolve any problems, rather than to resort to formal recovery, let alone resolution, measures. This principle is implied by **paragraph 3.11** but could be made clearer.

Paragraph 3.10 states that "*CCPs and other FMIs that take on credit risk have a "waterfall" that determines the order in which different types of resources are drawn upon to absorb losses.*" CCPs are required to have financial waterfalls, but this may not be true for other FMIs, depending on what is meant by "take on credit risk". While a system with secured cash advances made to facilitate settlement certainly takes credit risk, mitigated by collateral, it would typically not have a waterfall in the sense that a CCP does.

As noted above, when final principles are established by the CPSS and IOSCO, such further distinctions should be made to avoid possible confusion or establishment of inappropriate statutory measures. It should be noted that little is in fact said about the FMIs that take on substantial credit risk but are not CCPs and therefore do not mutualize risk. The *Consultative Report* requires FMIs that take credit risk to have in place procedures to manage a participant default and to allocate losses that might result. But, the consultation focuses almost exclusively on CCPs. A CCP centralizes risk for a market, managing the risk of default centrally on behalf of all of its participants. By contrast, CSDs that are banks are exposed to credit risk in relation to some of their participants, but do not centralize risk for a market. The granting of credit by the CSD (usually intraday only and fully collateralized) is designed to reduce systemic risk by greatly reducing settlement fails, particularly in a multi-currency environment. Where a participant defaults, such FMIs should already have in place appropriate risk-management policies and procedures based on the participant's collateral, conservative haircuts and the bank's own resources if eventually needed. There is no reason to believe that such measures would be insufficient to meet a potential loss, noting that such a classic credit loss would be bounded by the amount of the exposure and would not have

the unquantifiable characteristics of derivatives exposures cleared through CCPs. Furthermore, there would be no legal or conceptual basis to mutualize such exposures.

Paragraphs 3.12 – 3.14: <u>recovery</u> of FMIs that take on Credit Risk.

These paragraphs are in some respects the heart of the matter, reflecting the fact that the G20 mandate to move many exposures to central clearing gives the opportunity to manage risk in the system more effectively but also concentrates risks in CCPs.

Need for further analysis and discussion. The discussion here appropriately focuses on the need to allocate losses and also to re-establish a matched book in the remote but conceivable event that resources from margin, default fund contributions and assessments, capital and default procedures of a given CCP prove inadequate; however, both the discussion in the *Consultative Report* and internal discussions in the Institute's working groups indicate clearly that more analysis and a fuller discussion is needed before definitive recommendations can be made in this area.

Basic clarification needed. The discussion falls ambiguously between making a supervisory recommendation as to how CCPs' rules on end-of-waterfall situations should be structured and how resolution ought to be administered. These are both appropriate concerns, but it would be well if the final document better differentiated principles for the documentation of a CCP's *rules* for extreme contingencies (which, if they work, would avoid the need for recovery or resolution) and *intervention* by the authorities in either recovery or resolution. Recovery and resolution themselves need to be more clearly distinguished.

Even in cases where there is a need for official intervention, whether in recovery or resolution, the FMI's rules should be applied as fully as possible, because firms will have done their own contingency planning on the basis thereof. The rules need to be fully predictable, especially as there are likely to be substantial financial implications for participant firms, and indirect participants and customers, as well as potential capital and other regulatory implications.

As discussed further below, any recovery or resolution analysis should be done FMI-by-FMI (in effect product-by-product) where several FMIs are provided under the roof of one operator or owner. Viable FMIs (as defined above) should be left intact, and it should be possible to deal with non-viable ones only.

This is an area in which the dangers of unintended consequences are especially great. In devising recommendations for recovery and resolution of FMIs, especially CCPs, the incentives for firms to participate in CCPs (and for underlying clients to agree trades settling through CCPs) need to be taken into account, and remote-contingency solutions that might impose substantial losses on participants or clients should not be such as to create disincentives to participate or to provide liquidity in the market. Equally, as already discussed, care must be taken to structure recovery and resolution measures in such a way as to enhance stability rather than create rush-to-exit incentives.

Paragraph 3.13 proposes a possible manner of dealing with the "end of the waterfall" problem, where the resources of the default fund and auction and variation

margin haircut procedures are not sufficient to restabilize the CCP. As such, it is a good place to start a complex discussion; however, it cannot be considered the answer to the problem, especially not at this stage of the debate. Among other things, a much more thorough consideration of the full panoply of end-of-waterfall issues and responses is needed, and it seems anomalous at this stage to focus only on one possible – and controversial – solution. More discussion is required of auction procedures (including measures designed to assure successful auctions, such as waterfall "juniorization" of default fund contributions), variation margin to cover auction-related losses, and default-fund replenishments and assessments (and various means to cap such assessments). The point is not to advocate any of these solutions in particular (and indeed some existing solutions or ideas would be opposed by the industry) but to stress that the full range of options needs to be considered.

In particular, more consideration needs to be given to what happens at the very end of the waterfall – variation margin haircutting in certain systems – as well as to the issues of what happens when the full resources of the waterfall are exhausted. This is another instance where more analytical clarity and detail are required to work through and size the issues, whereas the present text risks mixing issues and phases of discussion.

There are serious issues about what to do about variation margin haircutting at the end of the waterfall, in particular whether liabilities should be capped and how they should be allocated; however, it is important to have a clear fix on those solutions before proceeding to the end-of-haircut phase.

The comments here cover a number of general considerations about the situation that is being addressed and issues that need further consideration. Note, as discussed above, that the **paragraph 3.13** proposal sits at the intersection of normal operation of default procedures, recovery and resolution. In any such situation, the FMI and the relevant authorities will need to act quickly and carefully to use available resources appropriately and to mitigate, rather than exacerbate systemic risks. The FMI's rules should be as clear and complete as possible and the authorities should have a clear sense of how they will react – a well-understood "presumptive path" – while retaining the necessary flexibility to respond to unanticipated circumstances.

Furthermore, there should be more attention to the incentive issues that the suggested solution would create. For example, some argue that partial tear-ups could adversely alter bidding behaviour in auctions, as members that do not have positions likely to be subject to tear-up would not have an incentive to bid as aggressively as they might, absent tear-up. Once again, the danger of creating rush-to-the-exit incentives is also an important question.

Although **paragraphs 3.13 and 3.14** are presented under "recovery", it seems at least highly likely that resort to any such solution would be in a "resolution" phase at least as to the FMI itself, and possibly its owner. It is hard to imagine resort to tear-ups before the point where the FMI is at the stage of a resolution solution such as the transfer of contracts to a bridge.

Once again, the issues need to be parsed through very carefully in the three possible states of application: business as usual (application of default rules); recovery, possibly with official intervention; and resolution.

In the remote contingency where a systemic CCP FMI has reached the end-of-waterfall stage and must do the allocation of losses of which one form is the partial tear-up, it would be realistic to consider how a resolution could work to resolve the issue and, if possible, arrange for continuation of its essential services. The possibility should also be confronted that temporary public sector advances may be necessary (as contemplated by the U.S. OLA). While that last resort is attractive to no one, and while it raises the recoupment issues discussed under **paragraph 4.22**, the special nature of FMIs probably make it more rather than less likely that recourse would need to be had to such resources in case of an FMI resolution as compared to a bank resolution.

End-of-waterfall issues have been the subject of considerable industry attention and some discussions with various authorities and central banks; however, it has not been possible as of this writing to come up with a fully developed proposal, for reasons sketched briefly below. The industry will continue working on a more complete proposal. In addition, it would be well to use the type of general roundtable discussion of all stakeholders suggested at the beginning of these comments to ventilate issues and possible responses before adopting any comprehensive solution or solutions. The adoption of any such solution would of course be further contingent upon careful analysis of its applicability in the circumstances of a specific FMI.

Paragraph 3.14 suggests selective tear-up of contracts could in imaginable situations be preferable to a complete tear-up of contracts in a complete insolvency of the CCP because it would reduce overall losses and reduce systemic impacts; however, that possible solution needs more study of implications and issues before it can be endorsed by the private sector. As noted above, the Institute is continuing discussions on this and related points.[6] This issue needs to be considered as part of a focused, all-directions review specifically of resolution for FMIs.

Any selective tear-up would necessarily have substantially uneven effects on different participants. Strong assurances would be required, especially in active cross-border markets, that any selection of contracts for partial tear-up or other solution of uneven impact, whether conducted by the FMI itself if operating within its procedures, or, as is more likely, by an intervening authority, would be conducted in an *objective, non-discriminatory* fashion, as required by Key Attribute 7.4, and insofar as possible on the basis of well understood, pre-established principles.

Furthermore, some are concerned that the inability to quantify the potential risks of a selective tear-up with allocation of losses as discussed herein, which would have a negative effect on risk management and regulatory reporting.

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[6] While work is continuing on that issue, it is important to stress that "re-bilateralization" of contracts, mentioned but dismissed in footnote 10 of the *Consultative Report*, would clearly be unacceptable as a broad solution as it would defeat the purpose of the CCP, causing instability by encouraging runs against firms perceived as weakening in adverse market conditions. There may be instances where voluntary tear-up would be an appropriate solution that individual firms could elect, but imposed re-bilateralization should be out of the question.

Both the industry and the authorities need more time for study and discussion of the dilemmas raised by any end-of-waterfall solution; fairness of outcomes, minimizing economic impacts, allocation of losses, and appropriate treatment of clients all require more discussion. But it should be recognized that to some extent the dilemmas reflect a trade-off between prudential regulation and optimizing outcomes in remote but possible FMI resolution situations. Prudential regulators could make a contribution to the solution of this problem by providing guidance that would allow firms to make reasonable estimates of possible losses from FMI rules that provide for partial tear-up at the end of the waterfall, and to base risk management decisions, capital calculations, and risk management on such estimates, recognizing that a completely accurate estimate of such losses would not be possible. While development of the guidance that would be required to make this work would not be easy, it would help a great deal if certainty of regulatory requirements were made part of any eventual recommendations on end-of-waterfall issues.

Once all these issues have been fully ventilated by study by all stakeholders, each CCP or other FMI that mutualizes risk should make sure that it has addressed end-of-waterfall issues in a manner that is as fair and equitable to all concerned, with rules established in full transparency to the market and with the approval of the relevant regulators.

See the further discussion with respect to **paragraphs 3.17 – 3.18** below.

The *Consultative Report* asks:

- **Is tear-up an appropriate loss allocation arrangement prior to resolution of a CCP? If so, in what circumstances?**

- **To what extent should the possibility of a tear-up in recovery be articulated in ex ante rules?**

Once the waterfall has been exhausted and there are still losses to be apportioned, someone has to bear the losses. The discussion above considers some of the fundamental dilemmas, but there should be as much certainty as possible about how the losses would be applied. Furthermore, as discussed more below, any allocation of losses would have governance implications that would need to be considered.

Some believe that a more fully worked out version of a partial tear-up solution may eventually be the best recommendation for adoption in a CCP's rules, but further discussion is required before embracing that conclusion. In any case, any tear-up that is envisioned should be set out as fully as possible in ex-ante rules. As stated above, there would be some degree of unfairness to any selective contract termination, but, at least if established in *a priori* rules, participants and underlying contracting parties would have an incentive to accept results that might be somewhat rough-and-ready if they added to assurances that most contracts would remain valid.

Need to Facilitate Cross-Collateralization and Interoperability

Among the many issues that require additional attention are the effects of interoperability. This also creates dilemmas, as more interoperability will be necessary in the future, if the premises of the G20 commitment to more central clearing are to be realized. However, that requires attention to resolution issues to contain contagion in case of failure of a CCP or other FMI.

The growth of competing CCPs covering in some instances the same products requires consideration and it is likely that interoperability will be necessary for the system overall to be safe and sound. Further, as also discussed below, interoperability, despite the complexity and interdependence that it implies, will also be necessary to manage the huge increase in demand for high-quality collateral that will be required under post-crisis clearing and liquidity regulations.

Ex-ante agreements will be needed to look across CCPs. Most participants are likely to be participants in multiple CCPs, and a defaulting firm would default in several FMIs simultaneously. The defaulter's portfolio may not have the same directionality for each CCP (for similar contracts), and so there would be netting benefits (and therefore risk reduction) to the extent that the defaulter's portfolio can be looked at across CCPs, but procedures to manage auctions and price the results across CCPs will be complex. Nevertheless, given that interoperability is very likely to grow, and is essential to minimize inefficiencies in the use of collateral, fragmentation of markets, and dilution of liquidity, such issues will have to be faced. Conversely, interoperability may also be a plus for resolution of certain CCPs and FMIs as it may create the necessary preconditions for the transfer of business of a failing FMI to a continuing one for the same products. See also the discussion of **paragraphs 4.24-4.26.**

From the FMI point of view, it will be important to be certain that the cross-system impacts of a failure of linked FMIs, especially CCPs, are analyzed and planned for, and that the amounts of possible liabilities or losses are well understood. In addition to looking at opportunities to net participant positions, where a participant may have opposite trades in different CCPs, the relationships of the CCPs to each other also need careful analysis. For non-CCPs, such as CSDs, it will be important to gain assurances that undue or unintended exposures to losses are not created through direct or indirect linkages (including through participants) or standard or interoperable links of the CSD to CCPs or other FMIs.

The important point here is to stress that the eventual CPSS-IOSCO principles for FMI resolution should be designed to facilitate the development of interoperability wherever possible, and certainly should not put up additional obstacles to that development.

Regardless of the importance of cross-CCP solutions where a defaulting firm has positions even in the same product in multiple CCPs, it is not possible to imagine that cross-FMI netting would be applied in the absence of the necessary ex-ante rules and agreements.

- **Should there be a limit to the number of contracts that are eligible for tear-up?**

While "end of waterfall" conditions are highly unlikely in any reasonably designed system, it is also true that it is not theoretically possible to calculate the potential liabilities accruing to participants in an extreme situation.

From the macroprudential point of view, looking at the financial system as a whole, a "good to the last drop" solution, whereby participants would be susceptible to potentially unlimited calls for further resources, is not a viable option (this point is discussed further below). Therefore, some way of containing that potential liability is important, but it is difficult to address the situation in the abstract. It may be that, for a given system, a fixed percentage of contracts could be established, after appropriate analysis as a maximum, but that is not a certainty that can be stated at this stage. Such issues would have to be examined as part of the broad dialogue suggested above.

Furthermore and as also discussed below, it will be *essential to allow losses to accrue to indirect participants and to underlying customers*. This will become all the more important as more and more contracts are put through CCPs and as the business is rapidly becoming more customer-driven, both because of regulatory imperatives and because of market pressures. As these changes work through the system, any suggestion of a "good-to-the-last-drop" solution applicable to *participants only* will become less feasible.

While allocation of losses to customers is unattractive in many ways, it may also be the most macroprudentially sound solution to a difficult problem. Of course, firms should be allowed to allocate risks contractually with their clients, subject to prudential and conduct of business considerations that are not appropriately addressed here.

- **How should the appropriate haircuts be determined?**

There are several possible approaches, all requiring further development and debate. Imposing haircuts on aggregate mark-to-market gains of non-defaulting participants in the failed CCP — that is, in-the-money positions since the most recent successful variation margin run is one that is attractive to certain firms. This approach would have practical advantages, although it would have somewhat arbitrary effects, especially if there were no cross-FMI interoperability and certain participants ended up with one-way positions in one CCP and the balancing positions in the other direction in another CCP, because the positions could not be bridged and losses would be imposed in one direction only.

Alternatively, losses could be apportioned to all non-defaulting participants, including segregated client positions, proportionately to their contributions to the default fund; however, this solution is arguably arbitrary and might exacerbate rush-to-exit incentives.

Either of these options should be considered further as part of a comprehensive solution, as discussed above. A fully vetted, consensus opinion is not possible at this point in time; however, it is clear that one characteristic of a consensus, comprehensive solution, if one can be found, will certainly be that it will be widely understood across the market, and will be made as predictable as possible.

It may be that the outcome of this discussion should be a set of CPSS-IOSCO principles of how to establish fair and effective haircut procedures, or acceptable alternatives, rather than a prescriptive requirement imposed top-down on CCPs.

Important additional issue: Liquidity Problems of a Solvent FMI

Thought should be given to instances in which a CCP experiences a liquidity shortfall as a result of a participant default but is otherwise solvent. The CCP, in such a case, might first draw on its own cash resources and collateral and, once those resources are exhausted, allocate proportionally the cash shortfall across the variation margin owed that day to direct and indirect participants alike.

Consideration should be given to requiring CCPs to make adequate provision for liquidity issues that might arise, analogously to the liquidity coverage ratio required of banks. Post-crisis legislation in the U.S. and the E.U. has laid the groundwork for access of CCPs to emergency facilities from central banks. Procedures to make that access readily available on short notice on a well-understood basis should be developed. In some cases, and depending on many variables, it is possible that private-sector standby liquidity facilities could be provided by syndicates of banks or other financial institutions such as insurance companies.

Note that any such facilities probably require contractual and statutory legal authorization to rehypothecate customer collateral to private lenders of a standby facility or to relevant central banks.

Such facilities should be designed to allow a systemic FMI to cope with a liquidity problem in an ordinary course mode: as when a bank makes use of a central-bank lender-of-last-resort facility, it is in stressed conditions but not necessarily in recovery, so too it should be possible for an FMI to use such facilities without necessarily entering into the recovery phase.

If the CCP does not have sufficient committed liquidity facilities from banks or its central bank upon which to draw, presumably using its non-cash collateral as a pledge, then it would be unable to meet its variation-margin or cash-payment obligations on the given day. A wide allocation of liquidity shortfall may be appropriate to allocate non-payment in the case there is insufficient liquidity. A CCP may indeed have sufficient resources, but on the day of a default a portion of these resources may be in non-cash collateral. This should be dealt with in its rules, to allow an ordinary-course procedure if possible. Circumstances might dictate that such recourse would take place while a bank is in the recovery mode, or push it into recovery; but, if so, its rules should make appropriate provisions and any intervening authority should respect those rules. It is less likely that such rules would be applied in resolution, given that the entity would then presumably not be solvent and hence the liquidity procedures envisioned in this section would not be feasible.

Any shortfall the CCP may temporarily face should of course be met first with its own available cash resources and collateral. If that is insufficient, an allocation of the cash shortfall ratably across all participants, direct and indirect alike, to which it owes variation or otherwise owes cash, should be made pending liquidation of the collateral for cash.

Upon liquidation of such collateral, the affected participants should have a *priority claim for reimbursement*. This should be sufficient to resolve a temporary liquidity problem.

Paragraphs 3.15-3.23: FMIs that take on credit risk: Resolution (3.15-3.23)

Paragraphs 3.15-3.18: FMIs that take on credit risk: triggering of resolution and allocation of losses

Paragraph 3.16 says, "*loss allocation supported by statutory powers is likely to be an essential tool if critical services are to be continued. While the FMI's rules would remain the starting point for such loss allocation, loss allocation may need to go further than what is contemplated in these rules.*" **Paragraph 3.17** suggests that "*This further loss allocation could be implemented through haircutting of margin and by enforcing any outstanding obligations under the FMI's rules to replenish default funds or respond to cash calls.*"

Once again, these paragraphs need to focus more on the distinctions between ordinary-course application of a firm's default rules, recovery, and resolution. As a matter of principle, the rules of an FMI should provide for the *entire* loss allocation, which would include the haircutting of margin and enforcement of obligations discussed in **paragraph 3.17**. This may in some FMIs require taking the allocation further than is done under existing rules, and the CPSS and IOSCO could provide the impetus for FMIs to take that next step. As noted above, however, caution is required to avoid creating head-for-the exits incentives.

To some extent, the loss allocation would need to be tailored to the nature of each FMI, the products it treats, the nature and depth of the related markets, and the identity of its participants and their underlying customers.

The *Consultative Report* asks:

- **What qualitative or quantitative indicators of non-viability should be used in determining the trigger for resolution for different types of FMI?**

The general test of resolution pursuant to Key Attribute 3.1 is appropriate, *viz.* that resolution should be initiated "when an FMI is no longer viable or likely to be no longer viable and has no prospect of becoming so," is appropriate. As discussed elsewhere in these comments, it is important to make the default, recovery, and resolution phases for an FMI as transparent and predictable as possible, recognizing that the final decision will require an exercise of judgment by the authorities[7].

The test of "*clear evidence* that the FMI default management or other risk management tools will not allow the FMI to continue to fulfill its obligations *and* that the FMI has no reasonable prospects in the circumstances of doing so" [emphasis added] set out in the commentary to Key Attribute 3.1 is appropriate on its face, but the introductory language

[7] Thus, the statement in the commentary calling for indicators and factors that authorities are likely to take into account in deciding whether to initiate resolution should be publicly available or at least to known to the FMI, its participants and shareholders, is entirely appropriate.

may create the impression that early intervention is intended, whereas in fact entry into resolution should only occur at the latest possible moment that is consistent with orderly and manageable resolution. There is a danger that too-early intervention would disrupt the operation of an FMI's agreed-upon rules and the reasonable expectations of participants and the market generally.[8]

It is certainly true, as the *Consultative Report* makes clear in the commentary just cited that problems in an FMI may arise suddenly and the resolution authority should have the power to intervene and act immediately; however, that does not imply that the indicators or the trigger should be moved earlier.

As a practical matter, the primary indicator for a CCP would likely be its own determination that it could not, or reasonably believes it would not, be able to fulfill its obligations, or did not have the requisite collateral and resources to do so, and it so notified its regulator (which would be essentially synonymous with the test quoted above). The indicators for other types of FMIs would depend on their business models (see also the discussion of **paragraphs 2.2 and 2.3**.)

As stated in the commentary, other indicators of non-viability (insolvency or near insolvency in accordance with Key Attribute 3.1) are likely to be similar to those for other types of SIFIs. Such indicators would include the following:

1. the assets of the FMI is, or is likely to be less than its obligations (a "balance-sheet" test of insolvency; essentially equivalent to the test stated in the commentary to Key Attribute 3.1);
2. the FMI is, or is likely to be, unable to pay its obligations in the normal course of business (a "cash flow" test);
3. the FMI (in its corporate form) incurs or is likely to incur, losses that would deplete all or substantially all of its capital, and there is no reasonable prospect for it to avoid such depletion; and
4. a case has been, or likely will promptly be, commenced with respect to the FMI under otherwise applicable insolvency law.

One alternative to the insolvency-based model is the proposal put forward by H.M. Treasury, which appears to offer authorities broader ability to intervene prior to insolvency so as to ensure the continuity of critical services. The HMT Paper calls for powers for the central bank to intervene to exercise a "stabilization power" over a clearing house if it is (a) failing or likely to fail the applicable recognition requirements; (b) it would not be able to take action to fulfill such requirements while also maintaining continuity of central counterparty clearing services; and (c) the exercise of the power is necessary in the public interest. This approach, according to paragraph 3.20 of the HMT Paper, is intended to allow the authority to ensure the continuity of services and to prevent the closure of critical business lines, particularly in the case where a clearing house would otherwise close a business line critical to the market's operation in order to restore itself to compliance with its requirements.

[8] See Section 3.1 of the IIF report, *Making Resolution Robust*, for a fuller discussion.

H.M. Treasury's concern about the need to intervene to maintain specific, systemically important services to prevent a CCP's destabilizing insolvency is of course entirely appropriate. However, defining the intervention indicators around conditions for authorization may not be appropriate, for two reasons. First, the test may not work in countries where the threshold criteria for authorization may be substantially above what would be a practical level for viable activity. Therefore, second, such a test could lead to too-early triggering of resolution for the reasons mentioned above (although it might be appropriate for the authorities to undertake less-drastic, recovery phase intervention). For purposes of formulating international standards, the insolvency-based indicators discussed above seem entirely sufficient (and would work in jurisdictions that have already adopted an insolvency-based approach).

However, the concerns reflected in H.M. Treasury's approach should be considered carefully in developing prudential standards as well as recovery and resolution measures for FMIs. It is important that in formulating appropriate intervention triggers, the CPSS and IOSCO take into account H.M. Treasury's insight as to how a recovery feature designed to prevent a CCP's destabilizing insolvency could preclude intervention to assure continuity of essential services. Where a specific FMI clearing service is in danger of not being able to fulfill its obligations, even if its corporate ownership structure is not insolvent, measures should certainly be in place to make intervention possible to address the issues of the specific FMI service, and eventually to resolve it appropriately. At the least, regulatory approval should be required before a corporate owner of a systemically important CCP (or other FMI) could close a line of business, and provisions should be made for the separate resolution, possibly including recapitalization and relaunch thereof.

- **What loss allocation methods must be available to a resolution authority, and for which types of FMI?**

The issue is not so much the powers that ought to be available to the authority: all the powers foreseen by the *Key Attributes* would be appropriate to have available to respond to all possible contingencies. That said, the appropriate use of such methods will be subject to the specific type of FMI, its pre-agreed loss-allocation procedures, its ownership and governance, and its structure generally.

- **Could or should these resolution powers include tear-up, cash calls or a mandatory replenishment of default fund contributions by an FMI's direct participants?**

See the discussion of **paragraphs 2.11 – 2.13** above.

Paragraph 3.17 notes vital questions about "*the degree to which the liability of individual participants should be limited.*"

As noted before, this discussion requires a clear distinction between (a) the issues related to dealing with current losses and (b) recapitalization or replenishment of the FMI to resume dealing with fresh transactions. Further, liability in the sense of exposure to loss of resources entrusted to the CCP or liability for a call of resources by the CCP needs to be

distinguished from business exposure to the (perhaps unquantifiable) losses a firm might suffer in case of a failure of the CCP and the exhaustion of its waterfall resources.

There should *not* be an unlimited obligation to replenish an FMI's (CCP's) resources with replenishment or recapitalization for future operation of the FMI. There should be the option of an orderly wind-down of the FMI if that is what makes economic sense.

Many CCPs today are set up with effectively unlimited liability or unlimited potential losses on positions, including as a result of forced allocation or invoicing-back provisions; however, as discussed in the first part of this these comments, for purposes of risk management and prudential regulation, the escape hatch is the ability of firms to resign from the system.

The greater and the more unpredictable the liability to which participants may be exposed, the greater their incentive to resign from a given FMI will be, and to do it earlier in the process. This is particularly the case if it would extend to recapitalizing or replenishing an FMI for future business. The need to consider increasing incentives to resign is of course more acute in smaller and more peripheral FMIs, as compared with large and central FMIs to which there may be no good alternative.

FMI rules and resolution options should be structured to avoid closing services insofar as possible; however, an unlimited call on participants' resources outside of the system cannot be a viable solution, from either a microprudential or a macroprudential viewpoint. In some systems, there may be a capped call on additional resources from participants depending on a number of variables, including the number of defaulting participants. Such approaches require further discussion, especially as to the determination of caps, but the option is available in some systems.

In any such discussion, it is important to distinguish a call on resources in an FMI resolution from bail-in of senior debt for a regular financial institution, where the amount of potential bail-in exposure is by definition capped at the face amount of relevant debt.

Further, as discussed below, if that stage is reached in any FMI, ownership and governance issues would have to be addressed.

Paragraph 3.18 notes that *"any limits in resolution on obligations of direct participants to absorb losses up to the level of their claims would mean that other participants and counterparties, including clients accessing central clearing through a clearing member, and also linked FMIs, may be exposed ultimately to taking a share of losses."* This is correct, and, as already discussed above, it is necessary that indirect participants and clients be exposed to a share of losses for the business they conduct through a given FMI.

Even wide loss allocation with no fixed limitation could not give rise to an open-ended commitment by members to replenish the resources of the FMI: given post-crisis regulatory and market evolution toward central clearing, in most FMIs, it will be necessary for losses to accrue to indirect participants and underlying clients (although that allocation may appropriately be done through client agreements with direct participants).

- **Does it make a difference if the losses are from a defaulting member or are made up of other losses (e.g., losses in investments made by the FMI)?**

Losses arising from a defaulting member require special arrangements, as discussed extensively herein and are essentially driven by the raison d'être of an FMI that provides central clearing or other forms of mutualization.

Where losses arise from an operational, financial, or business failing of the FMI or its owner or operator, the situation is completely different. In such situations, the losses should accrue through the ownership and control structure, without reference to default procedures (unless the FMI's rules so provide). Such situations are much closer to a normal insolvency or to a bankruptcy of a public utility (but for the need for very rapid action in resolution). In such situations, the resources to repair the damage should come, as they would in the bail-in of a financial institution, from the FMI's equity and debt structure, not from its default fund or other default resources.

Principle 15 appropriately requires adequate capitalization of FMIs, and such appropriate capitalizations should be examined with the supervisors through each FMI's recovery and resolution planning process.

Where there is corporate ownership, the owners should stand to lose control of the FMI through the resolution procedure, and the resolution authority should have the power to sell, merge or otherwise change the structure of the FMI as appropriate to minimize damage and if possible to provide continuity of functions. See the further discussion of **paragraphs 3.19-3.21** below.

Where the FMI is owned on a mutual or quasi-mutual basis by participants (e.g., where it is organized as an ordinary corporation but without expectation of profit by owners), the same principles apply: members, like other shareholders, would stand to lose their up-front equity-like investments. Unless the activity of an FMI that has suffered operational or financial losses would be readily transferrable to another FMI, it may be that the best disposition would be to transfer it to a bridge, possibly to be owned by its continuing participants as a way to keep services going, but any such outcome would depend on the value of the FMI, the value to be expected from its continuing, and the willingness of participants (or other investors) to make any further investments needed.

Depending on the conditions of an operational or other failure, it might be possible to recapitalize the FMI by bail-in-like mandatory conversion of any remaining clearing-fund or resources after disposition of failed transactions, if doing so would assure continuity of services and allow problems to be sorted out. Participants would be compensated with ownership interests in the recapitalized FMI, which presumably would have some value. (This situation would be distinguishable from a situation where the default procedures were in play, where a bail-in of such resources would not be appropriate, as discussed elsewhere). Beyond that, however, it would not be appropriate to force additional investments in an FMI if participants, like other investors, were unpersuaded that it would be viable.

As suggested in the IIF report, *Making Resolution Robust,* resolution powers in all relevant jurisdictions should include provision for *super-senior financing* (on the model of U.S.

"debtor in possession" loans) to provide fresh resources for the operation of a recapitalized entity. Such super-senior protections should apply equally to any temporarily advanced public funding, which could be earned out over time, or to any fresh private funding that might be provided, whether by participants or any other investors.

Whether such a super-senior option would be feasible in practice in any particular situation would depend on the facts and circumstances and, given the economics of FMIs, is probably not the most likely result. Still, the option should be available. As already discussed, an FMI resolution might require temporary public finance, subject to recoupment pursuant to **paragraph 4.22.**

- **In what circumstances, and by what methods, should losses be passed on beyond the direct participants – e.g. to the clients or FMI shareholders – in resolution?"**

The issue of passing losses beyond direct participants to indirect participants or underlying clients has already been discussed for FMIs that operate as central counterparties or similar functions. The means of doing so should be left to agreement between direct participants and the indirect participants or the clients for which they act. The same principle would apply to clients whose assets are held in identified segregated accounts or omnibus segregated accounts.

Beyond that general principle, it is important to keep in mind that various FMIs operate on different models. U.S. futures commission merchants, for example, operate on an agency basis and clearly could not be expected to take any risk for CCP failures under their current business and regulatory model. In other instances, the picture may be less clear, but in many cases, participants in FMIs operate on a riskless-principal or agency basis, with implications varying by contract and from jurisdiction to jurisdiction. Even where both the client-to-participant and participant-to-FMI legs of transactions are stated to be on a strictly principal basis, there may be extensive contractual allocation of responsibilities, including responsibility for CCP failure or loss that should be respected.

In some cases, indirect participants and clients may argue that the firms that are direct participants in systems should take full responsibility for their failings, but that is a matter for agreement. If there are regulatory issues in such relationships, especially with respect to underlying retail clients, for example, such issues should be addressed through the appropriate conduct-of-business and prudential regulators, and there is no obvious reason why such issues should be resolved at the level of establishing principles to apply in the remote contingency of an FMI resolution.

As already stated, the dynamics of parceling out exposure to FMI failures are changing rapidly with the moves to put more products on exchanges, to clear them through CCPs, and to require further segregation of client assets. Resolution principles should respect and not attempt to change those dynamics.

Once again, the above discussion applies to CCP and similar FMIs that mutualize risk. Where credit and securities-lending facilities are provided in the CCP itself, other procedures would be required, which would presumably rely for the most part on realization

of collateral for cash advances or for securities lending guarantees. In such instances, it may be appropriate to deal with any residual losses as with other financial losses (as discussed above), and it is likely not to be appropriate to mutualize such losses. Where such services are provided through an associated bank or bank consortium, presumably normal bank resolution processes should apply, although the resolution authority would, of course, have to take special consideration of the interaction of such banking services with the continuation of the associated FMI. (Such services may, however, be more readily substitutable than other FMI services.)

Issues of passing losses to FMI shareholders are discussed in the immediately preceding section, and in the discussion of equity issues below.

- **What, if any, special considerations or methods should be applied when allocating losses whose maximum value cannot be capped (e.g. when allocating potential losses that might arise from open and uncapped positions at a CCP)?**

See the discussion above of **paragraphs 3.11-3.14.** Credit losses on derivatives, cleared or not, generally cannot be capped. If full loss allocation is foreseen in the rules for the given FMI, that should be sufficient for a resolution situation as well as a recovery situation. See also the discussion of **paragraph 3.18** above.

Paragraphs 3.19 – 3.21: FMIs that take on credit risk: the treatment of equity holders

Paragraphs 3.19 and 3.20 float the possibility of "bail-in" (once in resolution, after application of waterfall and other mechanism per the FMI's rules) where the FMI has issued debt securities or has significant loans or intragroup balances, before noting that this may be "*relatively unusual*". See also **paragraphs 4.13 and 4.14**. The principles applicable to disposition of equity interests have already been touched upon under the discussion of **paragraph 3.18** above.

The Report (here as elsewhere) needs to focus more sharply on the distinction between the FMI and its operator, any upstream corporate owner, and its corporate structure.

FMIs, regardless of corporate form or licensing (even if licensed as banks), are fundamentally different from banks. The same upstream owner may operate several distinct FMIs with separate default funds and collateral policies. The owner or operator may provide specified amounts of capital to a given FMI but may not have a further financial commitment to the waterfall. Therefore, the FMI could fail while the upstream owner remains solvent (even if all the capital it has committed to the FMI has been wiped out), or the owner could fail and (especially if its capital in the FMI is ring-fenced) the specific FMI could continue. For these reasons, among others, it will be important that any holding company of an FMI be subject to the same recovery and resolution regime as the FMIs under its umbrella.

Furthermore, it is important to stress the management and governance issues that are special to FMIs, especially but not exclusively to those that act as central counterparties or

provide settlement guarantees. At some CCPs, there is a risk committee or similar body made up of participants with substantial financial exposures to the FMI and, in some cases, the largest and most concerned users. There may be structural conflicts of interest between the owner or operator (especially if a separate for-profit entity) and the clearing committee or similar body, and there will be many cross-currents on issues such as collateral requirements, admissions, operational standards, fees and charges, etc. There are no right or wrong answers, except that such differing interests need to be taken into account in recovery and resolution.

As already indicated, it would make sense for equity owners (including participants in their capacity as equity contributors in a mutual or quasi-mutual structure, see the discussion under **paragraph 3.18** above) to bear any losses associated with operational or financial risk.

The operator should normally be reasonably capitalized and manage its liquidity as needed to withstand foreseeable operational and financial risks, and the FMI similarly should have adequate capital and funding provided by the owner or operator where different.

Although the analysis depends on the nature and structure of each system and the risks it faces, it is quite possible that the resilience as the FMI qua FMI would appropriately benefit from resolution procedures allowing the authorities to write down the capital and bail-in the debt provided by the upstream owner if necessary to recapitalize the FMI after an operational or financial failure, other than one having to do with participant default. (Any third-party senior unsecured debt might also be subject to bail-in, but that would appear unusual, as the Report recognizes.)

The resolution authorities should have the power to replace the operator in such cases. The authorities in such cases would need to take into account the facts and circumstances, for example linkages between a trading venue and a CCP. Furthermore, as with other resolutions, the presumption should be that the board and management of the FMI should be replaced (unless the FMI is transferred away from its corporate owner, in which case it should be handed to new management and a new board structure after resolution).

Where the failure of the FMI results not from operational or financial problems but from a default of a participant, the capital and funding dedicated by the upstream owner or operator should be at risk pursuant to the FMI's agreed rules. Where those resources are consumed by application of the waterfall procedures, it is appropriate for them to be wiped out, and (unless otherwise provided by the rules) the resolution authority should have the right to transfer the corresponding ownership interests to those participants who may participate in the replenishment of the resources of the FMI in order to keep it going.

A more difficult question would be whether a solvent upstream owner or operator should be required to contribute additional equity or other resources to an FMI that is in a state where resolution would be necessary. Perhaps the answer would be that the owner should be required to contribute if it expects to retain an ownership interest in the FMI, but not otherwise, in the same way that any provider of capital to a bank in resolution could see its interest wiped out in resolution. To put it another way, the owner should be expected to

recapitalize the FMI or yield all control and interest to the participants (or to the resolution authority, as the case may be).

Acceptance of this principle would further imply that there should be a recognized capital and funding requirement of the owner or operator toward each FMI under its control, and that resources required to meet such requirements would be ring-fenced and not withdrawable in the event the owner becomes insolvent but the FMI remains viable (subject of course to transfer of such interests to another owner that would be accepted as suitable by the relevant regulators as a part of the owner's resolution; see the discussion under **paragraph 3.18** regarding cases of mutual ownership).

Recovery and resolution planning of the FMI should also take into account ongoing provision of computer and other operational requirements in case the owner's interests are bailed in, or the operator is replaced.

The *Consultative Report* asks:

- **How should equity in FMIs be treated in resolution scenarios: should it be written down in all circumstances?**

Observance of the principles suggested in the foregoing discussion should effectively answer the issues raised in **paragraphs 3.20 and 3.21.** The *Consultative Report* warns that "*imposing losses on equity holders may lead to complications for resolution in some circumstances – for example, where the owner of the FMI operates not only the service in which a participant default has occurred and for which resolution is necessary, but also operates other critical FMI services. In these cases, wiping out the FMI's equity might necessitate the resolution of other critical market services that it runs.*" These are serious issues, but should be manageable, as discussed above, by enabling the upstream owner or operator to dedicate specified resources to a given FMI and to operate each FMI under its control on effectively a limited recourse basis, potentially subjecting each FMI to separate recovery and resolution planning and procedures.

From a broader perspective, when failure results not from an operational problem but from a participant default, with exhaustion of the resources available under its defined waterfall procedure, and the FMI is placed into resolution, its ownership should presumably be wiped out, its management replaced, and its governance changed. Normally, exhausting the waterfall would imply consumption of a pre-determined capital contribution of the owner or operator.

In other words, the definition of what constitutes "equity in FMIs" needs to be taken into account, allowing for the various different types of ownership structures.

- **Are there circumstances in which loss allocation in resolution should result in a different distribution of losses to losses borne in insolvency?**

The foregoing discussion about equity and funding provided to an FMI partially answers this question: in an FMI, the contractual arrangements establishing the FMI's capitalization, funding, and governance will be much more sui generis than in most banks, and will need to be respected. Similarly, the resources that are required to be dedicated by

participants to an FMI will be governed by clear rules and procedures, which, as already discussed, should be observed. As to trade creditors and other claimants on the FMI, the normal insolvency priorities should be respected and should be relatively immaterial.

Given that insolvency and resolution law for FMIs is under-developed in some jurisdictions, it would be well for FMIs and the authorities to review whether applicable law would be consistent with the special equity and funding arrangements discussed above, and whether the allocation of resources in accordance with the agreed waterfall procedures would be respected. Similarly, of course, there should be no doubt about the protection of participants' or clients' funds and assets from the failure of the FMI (or its owners). It will be increasingly important to have assurances that these arrangements work across borders: there should be no doubt about any participant's rights, exposures, and observations, regardless of its nationality or location, and regardless of its participation across borders into a given FMI. Should any gaps emerge from such analysis, the CPSS and IOSCO should recommend that the FSB mandate all member states to remedy such gaps as quickly as possible.

- **Does it make a difference if the losses stem from a defaulting member or are made up of other losses (e.g., losses in investments made by the FMI or resulting from operational risks)?**

This question is answered above.

- **Should an FMI's rules for addressing uncovered losses be taken into account when calculating whether creditors are no worse off in resolution than in liquidation?**

Yes. **Paragraph 4.19**, discussing Key Attribute 5, correctly states the principle that the application of the no creditor worse off safeguard "*should be based on claims as they exist following the FMI's ex ante rules and procedures for addressing uncovered credit and liquidity needs and the replenishment of financial resources*."

Paragraphs 3.22 and 3.23: FMIs that take on credit risk: transfer of FMI's operations and use of early termination rights

Paragraph 3.23 argues that "*a stay on early termination rights may be essential to an effective resolution*" particularly for CCPs. It notes though that "*a stay on early termination rights should be distinguished from a stay on other contractual obligations*" which it describes in **paragraphs 4.16-4.18**.

The *Consultative Report* asks:

- **Are there any circumstances in which the ability to exercise termination rights as a result of the use of resolution powers should outweigh the objective of ensuring continuity?**

- **Are there any circumstances in which a temporary stay on exercising termination rights should apply for any event of default and not just where triggered by the resolution measures?**

The following discussion is based on potentially applicable law with respect to early termination in the U.S. and other countries, and the *Key Attributes*.

As a general rule, a participant should not be stayed or prohibited from exercising early termination rights arising under relevant agreements and CCP rules with respect to financial contracts with a CCP in resolution or insolvency. However, for a *systemic* CCP, the resolution authority must have the power to transfer such contracts to a bridge entity or another FMI (including, for these purposes, continuation in an FMI resolved by recapitalization, depending on the regime in the applicable jurisdiction) or retain such contracts in the failed FMI, subject to the usual anti-cherry-picking limitations (all contracts of the participant must be transferred (or continued in a recapitalized FMI) or all retained or rejected) and non-discrimination against cross-border participants.[9]

Any such transfer, if it occurs, should be done within the period as foreseen by Key Attribute 4.3, with proper notice to the affected participants[10]. The participant should be stayed from terminating by reason of the resolution authority's appointment (or the insolvency of the CCP) as foreseen by the *Key Attributes* unless it has notice of the contracts' transfer. Thereafter, if its contracts have not been transferred (and thus remain in the failed CCP or continued in a CCP resolved by recapitalization), the participant should be permitted to exercise its termination rights. If its contracts are transferred to the bridge or other FMI or continued in a CCP resolved by recapitalization, neither the appointment of the resolution authority nor the insolvency of the CCP should be considered a default of the bridge or successor FMI that would give either party the right to terminate its transferred contracts. This limitation would not affect any subsequent default by the bridge or successor FMI, such as a payment or delivery default, or an insolvency event.

Any rules with respect to stays must take into account the principles of the *Key Attributes* and also their effects on the treatment of assets under international standards, such as the Basel II treatment of netting.

In the longer run, consideration may need to be given to special termination and stay rules for FMIs, especially for CCPs.

[9] See Section 5 of *Making Resolution Robust* discussing treatment of stays and termination rights in case of resolution via recapitalization by bail-in, as an alternative to transfer to a bridge, if available under applicable law.

[10] The IIF report *Making Resolution Robust* says, "To balance … competing needs, resolution regimes (and international standards promulgated by the FSB) should provide for the following treatment of financial contracts:

(a) Counterparties should be temporarily stayed for **1 business day** following the initiation of resolution procedures from exercising financial contract termination rights premised solely on the financial company's failure, financial condition or entry into resolution in order to facilitate the possible transfer of such contracts to a bridge institution or a solvent third party; and

(b) Counterparties under any contracts so transferred should be permanently stayed from exercising such termination rights or those premised solely on the transfer of financial contracts. Similarly, if the resolution takes the form of a bail-in, counterparties should be permanently stayed from exercising termination rights premised solely on the bail-in of the financial company and exercise of related bail-in powers."

Section 4: "Important interpretations of the *Key Attributes* when applied to FMIs"

Many issues raised in Section 4 have been addressed in discussion of Section 3 and thus will not be repeated.

Key Attribute 3.2: Resolution powers (paragraphs 4.6-4.9): moratorium preventing outgoing payments from an FMI

Paragraphs 4.6 to 4.8 suggest that resolution authorities should have the power to impose a moratorium with a suspension of payments, but note *"the risk of continuing or even amplifying systemic disruption*" and therefore suggest that such a power might be counterproductive.

The *Consultative Report* asks:

- **Are there any circumstances in which a moratorium with a suspension of payments to unsecured creditors may be appropriate when resolving an FMI? Should this be limited to certain types of FMI and/or certain types of payment?**

- **If so, should resolution authorities retain the discretion to apply a moratorium and, if so, what restrictions (if any) on its use would be appropriate (e.g. scope, duration or purpose)?**

Claims of participants and underlying customers should not be conflated with "unsecured creditors" as the term is understood with respect to financing banks and other businesses. As already stated several times in this discussion, the rules of the FMI should be followed closely in all circumstances, except if necessary when they have clearly failed. This is vital to providing market confidence and should not be varied under any foreseeable circumstances (except perhaps a catastrophic shut-down of the entire market).

Bail-in of financing creditors is discussed above, which effectively covers the moratorium issue for them. If an FMI entered into liquidation, then the usual liquidation procedures and priorities should apply.

Key Attributes 3.3 and 3.4: Transfer of critical functions and use of bridge institution (paragraphs 4.10-4.12)

Paragraph 4.11 notes that transfer to a bridge may be a better interim solution to maintain critical operations than transfer of an FMI's ownership or functions to a third party in part because there may be "legal and operational impediments that may arise with an outright transfer to a solvent third party."

Transfer to a bridge institution may be an attractive interim solution, especially where there is a complex ownership structure of an FMI. Thus, that option should be kept open and the practical and legal groundwork laid as clearly as possible to make it feasible. See the discussion under **paragraph 3.18** above, and the general point about distinguishing the FMI qua service from its corporate envelope.

While there may certainly be legal and operational impediments to transfer to a solvent third party, there should also be no presumption against such a transfer, and the legal impediments (including impediments to cross-border transfer), at least, ought to be removed if at all possible. Operational impediments may indeed be serious (including such matters as the depth and extent of participation in another FMI, the operational or capital capacity of another operator, or the like); however, if a given FMI can be transferred on a stand-alone basis into the ownership of another group that runs FMIs and is capable of operating it, that may often be an attractive solution, and there should be no prejudice against it. It may be that there is a group that runs an FMI for similar products in the same jurisdiction, or that an operator of the same kind of FMI in another jurisdiction would be an appropriate operator for an orphaned FMI (e.g., in the case of CSDs). Outright merger of one FMI into another would be more complex, even where they treat the same products, and is not likely to be feasible overnight, given the credit and risk-management issues if there is mutualisation of risk, but, again, should not be precluded.

Paragraph 4.12 suggests that where transfer of a failing FMI in its entirety to a third party may not be possible and different products are risk-managed separately and default of a participant in one product exceeds the available resources, "one option may be to split off the other products into a bridge company so that *clearing may continue, while the clearing of the first product is resolved separately*."

Separate resolution (potentially via separate bridges) per product is an option that may be appropriate in certain circumstances. Here, as elsewhere in the *Consultative Report*, it would be helpful to have a clearer distinction between the functions of ownership and operation of FMIs, and the functions of an FMI per se.

Where a group structure includes multiple FMIs, such solutions may make entire sense, and separate transfer of FMIs that are risk-managed separately may be entirely feasible. While the CPSS and IOSCO certainly recognize these distinctions, refocus of the discussion of application of the *Key Attributes* to owners, operators and FMIs. As stated at the beginning of these comments, each FMI should be analyzed separately for resolution purposes from its corporate structure. Careful analysis will be required as part of the recovery and resolution planning process for each FMI to determine whether it is set up in a manner to allow it to be treated as such for recovery and resolution purposes as discussed in these comments; however, care should also be taken to minimize any inefficiencies or extra cost burdens on the market that might arise from the tradeoffs implied in that analysis.

Similarly, there needs to be clear focus on the different types of FMIs (as well as of different operational and ownership structures). Some of the simpler FMIs (such as data repositories) would be much easier to transfer to other operators or to bridge institutions, subject to adequate IT support and the like.

Key Attributes 3.5 and 3.6: Bail-in within resolution (paragraphs 4.13-4.14)

See the discussion of **paragraphs 3.19-21** above.

Paragraph 4.14 notes that, unlike banks, most FMIs typically do not have the kind of capital and liability structure that would make a bail-in practical. But "*Some FMIs, such as*

CCPs, do, however, hold significant amounts of ***variation and initial margin as well as default funds****. Where one or more of these sources have not yet been exhausted under the FMI's own loss allocation rules but the FMI's losses are still not fully covered, it may be preferable to haircut the creditors' claims to them and give these creditors equity in the FMI through the mechanism of bail-in in resolution rather than resort to liquidation. … A bail-in of collateral or margin could be applied in resolution together with other statutory powers to replenish default funds and cash calls ….* "

The *Consultative Report* asks:

- **Should the bail-in tool be available to collateral, margin (including initial margin) and other sources of funds if they would bear losses in insolvency?**

The IIF's basic views on bail-in are set out above; however, this discussion and the question raise several other points that need to be addressed.

First, treatment of variation and initial margin, and of default funds, needs to be kept strictly to the rules of the FMI. These resources are fundamentally different from creditors' claims in a usual commercial sense, and have been supplied for specific, systemically important purposes that are critical to the structure of relevant markets (and to the attainment of G20 goals for central clearing). Any treatment of such funds as general creditors' claims will disrupt commercial expectations and undermine faith in systemically important institutions.

Second, the discussion in **paragraph 4.14** seems to conflate specific FMIs with its ownership structure. As already discussed above, the owners and operators of FMIs need to be distinguished from FMIs themselves for resolution purposes.

Third, any treatment of margin and default funds would have to be applied in accordance with FMI rules on a product-by-product basis except where cross-collateralization has been the rule. The tendency to move toward more segregation and specific attribution of customer margin also needs to be taken into account, and reinforces the imperative not to treat such resources as if they were usual credit claims on an FMI.

Fourth, the "end of waterfall" procedures discussed at **paragraph 3.13** in effect provide a different route to the application of such funds in resolution and making them subject to bail-in could only interfere with the application of such procedures (and, if resources were subject to bail-in across different product-line FMIs within the same ownership group, that would undermine the stability and viability of the more solvent FMIs). In specific circumstances, depending on the resources available and a number of other variables, it may be conceivable that conversion of positive variation margin in an FMI for a particular product into equity to continue that FMI could be viable; however, the availability of such an option requires close ex-ante analysis and should be subject to the four considerations just stated. See the discussion of paragraph 3.18 above for further consideration of this point.

Key Attribute 4: Setoff, netting, segregation of client assets, stays (paragraphs 4.15-4.18)

See the questions raised under **paragraph 3.23** above.

Key Attribute 6 on Funding of FMIs in resolution (paragraphs 4.20-4.22)

Paragraph 4.22 argues that, whereas the *Key Attributes* require sharing of any unrecovered losses from a bank resolution across the banking system, "*for certain types of FMI, a narrower participant-based arrangement may be more appropriate. Indeed, CCP default arrangements are ex ante loss mutualisation mechanisms. These, and similar participant-based arrangements, may form the basis for resolution cost recovery*."

The *Consultative Report* asks:

- **In what circumstances and for what types of FMI should wider loss recovery arrangements exist beyond the FMI's own rules and the resolution powers of the resolution authority?**

As argued above, recovery and resolution of an FMI should rely insofar as possible on its own rules, especially for FMIs that mutualise risk. These issues are discussed extensively above with respect to **paragraphs 3.11-3.13**.

As discussed above, it is important to foresee the funding of FMIs in resolution, and it will be important to be as transparent as possible about how such funding might work. The possibility of private-sector super-senior financing of a recapitalized FMI should also not be excluded.

Paragraph 4.22 considers cost recovery in case there has been an advance of funding for a failing bank with cost recovery for such an advance to an FMI. The Institute has been in favor of provisions for ex-post recovery of funding that cannot be recovered out of the failing institution itself since the beginning of the resolution debates. (For a number of reasons, including the economic burden on recovery, the Institute is strongly against ex-ante funding for resolution funds.) However, the discussion in this paragraph goes seriously astray in proposing a narrow mutualization of any such loss recovery arrangements. It is true that, as discussed herein, a CCP will normally have detailed ex-ante loss mutualization provisions, and such provisions should be sufficient to take care of almost any foreseeable defaults. But the fact that such arrangements exist (and will eliminate any but the most remote failures) is irrelevant to the question of cost recovery for resolution funding, precisely because such funding would have been provided in a resolution after exhaustion of the normal mutualised resources.

Therefore, there is no reason why cost recovery for an FMI resolution should be assessed on a narrower basis than a cost recovery for a bank resolution. This outcome is important in order to contain the contingent costs of doing business with a given CCP and to avoid increasing the rush-to-the exits incentives that may affect participants in a downturn, as discussed at the beginning of these comments. Broader spreading of such cost would also be fairer, reflecting the fact that transactions have been pushed toward CCPs for broad systemic reasons, so it would be most appropriate for any such cost recovery to be spread broadly over the system, rather than being forced back onto the participants in the failing system (and their customers). Such a result is also likely to spread and thus dilute the

systemic burden of such cost recovery measures, although any cost recovery necessarily acts as tax on financial services and therefore may affect their delivery to the real economy.

Key Attributes 10, 11 and 12 on resolvability assessments, recovery and resolution planning and access to information and information-sharing (paragraphs 4.23-4.30)

Paragraph 4.24 states "*In the case of a CCP, resolvability assessments will need to pay special attention to any interoperability agreements and any cross-margining between CCPs.*"

The *Consultative Report* asks:

- **In conducting a resolvability assessment of an FMI, what factors should authorities pay particular attention to?**

As already discussed, functional interoperability and cross-FMI collateral arrangements (whether full cross-collateralization or at least collateral agency) will be increasingly important over time to maintain market efficiency and to manage the huge overall increase in collateral requirements in the system, as more products are moved into central clearing for policy reasons. It follows that interoperability, cross-margining, cross-collateralization and collateral agency arrangements need to figure in recovery and resolution planning.

This has two implications. First, care should be taken that the FMI resolution regime planned under the *Consultative Report* not operate as an obstacle to further cross-collateralization and related developments, which appear to be essential in order to make implementation of all the new regulatory imperatives feasible as a practical matter. See the discussion of interoperability under **paragraph 3.14** above.

Second, as discussed further under **Section 5**, the FSB, CPSS and IOSCO should make it a priority to identify and remove the remaining legal obstacles to cross-border operation of cross-collateralization, cross-margining, and collateral agency arrangements. While much progress has been made over the past 20 years on these points, more probably needs to be done, especially given the new focus on FMI resolution.

Paragraph 4.30 notes that "*Jurisdictions should ensure that no legal, regulatory or policy impediments exist that hinder the appropriate exchange of information*." This is clearly important, and the FSB, CPSS and IOSCO should take the lead in making sure that both direct legal obstacles to the exchange of information and national legal provisions that might make difficult the full protection of confidentiality of commercially sensitive and customer information are removed. This is an important topic, not only for FMI resolution, but for other aspects of the *Key Attributes,* as further discussed in the IIF report, *Making Resolution Robust.*

Section 5: Cooperation and coordination among relevant authorities

As made clear in *Making Resolution Robust,* and other previous letters and reports, the IIF believes there needs to be a solid legal basis for greater cross-border cooperation with respect to recovery and resolution. The focus for policymakers, at the international level, should be on developing a recovery and resolution structure that is seamless and consistent across jurisdictions. **Paragraph 5.1** rightly recognizes that FMIs provide services across borders to international firms, cover products from different jurisdictions, and may have links with other FMIs in other jurisdictions. These linkages are essential to their ability to support an efficient global market effectively, and such linkages will have to be nurtured and expanded to fulfill the G20 vision of a well-regulated, productive global market for financial services. Any failure to create a seamless, consistent, convergent and coordinated resolution system across jurisdictions would raise the potential for "ring-fencing" by local authorities and would introduce greater uncertainty in a time of crisis.

To develop a system that is successful, policymakers will have to: first, adopt a common set of standards; and second, work together to apply those standards in a manner that is coherent, coordinated and consistent across jurisdictions. There has already been significant progress in developing a common set of standards; the *Key Attributes* and the *FMI Principles* provide an expansive framework for recovery and resolution policies that the IIF has broadly endorsed.

As indicated by **paragraph 5.3**, Key Attributes 7, 8, and 9 as well as Responsibility E of the *FMI Principles* are broadly relevant to FMIs. It is important, however, that the FSB, CPSS and IOSCO look beyond the *Key Attributes* and consider a clear international standard for ensuring and enforcing cross-border cooperation on matters of FMI resolution. Such a standard would go beyond the laudable "expectations" established by the *Consultative Report* and the *Key Attributes* to establish a consistent approach, without legal ambiguities, that could be relied upon to be followed in a crisis.

One of the important goals of the *Consultative Report* is that the FSB, CPSS and IOSCO be able to operate effectively for purposes of coordinating FMI resolution. As the Institute has advocated in the past, it would be well if the G20 took steps to ensure that the international instances have all of the resources needed to have a complete grasp of the issues, devise and monitor appropriate standards, and contribute to coordinating any eventual resolutions that need to be undertaken.

It is clearly important to have "institution-specific agreements" to oversee the recovery and resolution planning and execution processes for FMIs. Such should include all concerned regulatory stakeholders, as discussed in regard to **paragraph 2.10** above, including notably the authorities of affected currencies. Nevertheless, more is needed.

Not enough progress has been made yet on cross-border cooperation and coordination, both as they apply to FMIs as well as to other financial institutions, and, in this respect, the *Key Attributes* and the *FMI Principles* fall short of what is needed. The legal tools or legislative framework to make possible fully cooperative behavior for the purposes of handling a cross-border crisis and resolution need reinforcement across jurisdictions. Cross-border cooperation is particularly important for FMIs offering services that are systemically

important on a global scale. It is worthwhile, in this context, to reiterate IIF proposals for strengthening cross-border cooperation, especially in the context of FMIs.

The IIF recommended the adoption of a substantive mandate, as was suggested in *Making Resolution Robust*. MOUs and bilateral agreements tend to be cumbersome and inefficient and may allow jurisdictions to deviate from prior understandings in a crisis; a single multilateral agreement would be preferable to establish the necessary basic level of cross-border cooperation. One way to achieve this would be through a Convention agreed to by all of the major states, which would gradually become binding over time. Such a Convention would apply to FMIs as well as to other financial institutions and would establish the standards to which the national authorities and member states would be held accountable. Under a Convention, the member states and their authorities would be required to fulfill certain obligations; these obligations would address the necessary provisions for information sharing; consultation before and during resolution; the roles and responsibilities of the home and host authorities; stays on rights and cross-defaults provisions; and other matters. As *Making Resolution Robust* makes clear, such as Convention would be in many ways the most efficient solution, and it illustrates the issues that need to be dealt with; however, it is not the only or a necessary means to achieve the ends of a fully consistent international regime for FMI resolution. The following specific observations may help.

Paragraph 5.1 rightly recognizes that, in case of an FMI resolution, it will be necessary to give effect on a transparent and expedited basis, to foreign resolution measures, pursuant to Key Attribute 7. This can be done either by mutual recognition or by consistent resolution measures in host jurisdictions or jurisdictions whose currencies or products are supported by a given FMI.

Achieving the risk-reduction purposes of FMIs requires a high degree of legal certainty in all affected countries. Thus, assurances should be obtained that implementation of the *rules* of each FMI, especially with respect to mutualization of defaults, will be respected legally in each major jurisdiction, including by the authorities handling the insolvency or resolution of a failing participant. As discussed above, allowing an FMI's rules for handling a default to play out is not, properly speaking, either a recovery or a resolution process, but a form of normal operation, though it is a normal operation that also requires secure legal resolution.

Recovery and resolution measures beyond normal operation certainly also require mutual recognition or appropriate enforcement action in relevant jurisdictions. As discussed in *Making Resolution Robust*, such actions need to be put on a very sound basis for bank resolutions. This is all the more true for FMIs. Therefore, there should be a clear legal basis for such actions (beyond what can be provided by MOUs in some cases), and the ability of national authorities to opt out of cooperation and mutual recognition that is allowed for in the *Key Attributes* would be even more potentially damaging than it is for banks. For FMIs, the entire market (including all concerned regulators) should be able to have full confidence that the FMI's default rules and the applicable national resolution provisions will be fully respected.

As discussed above, many national laws are vague or underdeveloped with respect to FMI resolution issues. While this vagueness is concerning from some points of view, it also

indicates that there is an opportunity for the CPSS, IOSCO, and FSB to establish standards that will not only create consistent regimes in each country, but across the entire global market.

It is also true, as **paragraph 5.2** points out, that there are long-standing protocols on arrangements for supervision of FMIs among concerned central banks, market regulators, and supervisors. Such protocols are highly important and have certainly contributed both to the quality of supervision of FMIs and to the confidence of markets in their reliability. However, such protocols have typically focused on important market regulatory, settlement finality, operational, governance, and reliability issues, and relatively less on resolution issues per se (though they may address crisis intervention). The present exercise offers an opportunity to update such protocols to cover default procedures, recovery and resolution, and to review and establish the legal basis for resolution, as discussed with respect to p**aragraph 5.1.**

Paragraph 5.4 rightly stresses the importance of excellent communications in a resolution context, and those communications would have to be not only with the regulatory members of each institution-specific agreement, but also with the supervisors of major participants, the FSB, systemic oversight authorities, and relevant central banks. For that reason, it will be essential to have a sound legal basis for data sharing as discussed under **paragraph 4.30** above.

Implementation of Principles. Finally, it may be worth reiterating the recommendation made in response to the CPSS-IOSCO *Consultative Report on Principles for financial market infrastructures* of March 2011, that policymakers consider the use of a "litmus test" in assessing the implementation of the Principles. This "litmus test" would ask: If another national regulator or supervisor were to implement the Principles in full and ensure that their FMIs were in compliance with them, would the regulator feel fully comfortable in recognizing that other regulator's oversight of an FMI as "equivalent" or "comparable"? Would such implementation give grounds for mutual recognition of FMIs in both countries? This would offer a basis for understanding that would, in principal, lead to better harmonization of resolution regimes, and though it would be unenforceable, this "litmus test" would at least point the national authorities in the direction of greater cooperation.