ISDA® Safe, Efficient Markets

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RE: CCP STRESS TESTING – TRANSPARENCY, GOVERNANCE, AND BEST PRACTICES

BACKGROUND.

On March 11, 2015, the Committee on Payments and Market Infrastructures ("CPMI") and the International Organization of Securities Commissions ("IOSCO") announced that they will undertake a review of stress testing by central counterparties ("CCPs"). This review is intended to provide CPMI-IOSCO with (i) information on how CCPs are currently implementing the *Principles of Financial Market Infrastructures* ("PFMIs")[1] on stress testing and (ii) whether additional guidance in this area is needed.

As part of this review, CPMI-IOSCO held a workshop in Frankfurt, Germany on March 22, 2015 (the "Workshop"). The Workshop revolved around two general topics:

[1] The Committee on Payments and Market Infrastructures ("CPMI") (formerly known as the Committee on Payment and Settlement Systems) and the Technical Committee of the International Organization of Securities Commissions ("IOSCO"), *Principles for Financial Market Infrastructures*, April 2012, available at: http://www.bis.org/cpmi/publ/d101.htm.

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- the analytical framework that CCPs currently employ for stress testing and the mechanisms for clearing members and market participants[2] to gain insight into and a measure of influence over the construction of such framework in order to satisfy their own internal credit risk due diligence requirements;

- whether supervisors and regulators should coordinate to devise standardized scenarios for CCP stress testing to ensure that CCPs have adequate financial resources.

The Workshop included attendees from every stakeholder category. At the request of CPMI-IOSCO, the International Swaps and Derivatives Association, Inc. ("ISDA")[3] and the Futures Industry Association ("FIA") nominated seven (7) representatives from a diverse group of clearing members. These representatives were acknowledged to be experts in assessing and managing the risks that clearing members face as a result of CCP stress testing actions or decisions.

ISDA appreciated the multi-stakeholder exchange of views at the Workshop. In addition, ISDA welcomed the CPMI-IOSCO request that all relevant stakeholders provide more detail on the positions that they had taken at the Workshop. ISDA is submitting this letter in response to the CPMI-IOSCO request (the "Letter").[4]

This Letter is divided into parts. Part I comprises an executive summary of ISDA views.[5] Part II highlights some considerations around transparency of CCP risk management. Part III presents general ideas on how clearing members and other market participants can more meaningfully contribute to CCP governance. Part IV suggests certain best practices for CCP stress testing. In each Part, ISDA attempts to explain the rationale for its suggestions.

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[2] This Letter uses the term "participants" to refer to (i) indirect clearing members and (ii) customers or clients of clearing members, whether direct or indirect.

[3] Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has over 800 member institutions from 67 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, clearing houses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the Association's web site: www.isda.org.

[4] This Letter is intended to reflect the consensus view formed by the majority of ISDA Clearing Risk and Capital Working Group (the "Working Group") members. The Working Group is an industry forum that is open to all stakeholders across jurisdictions (*i.e.*, clearing members, other clearing participants, and CCPs). All stakeholders had a chance to provide input, and the Letter benefitted from different perspectives. Nevertheless, a few Working Group members do not support all suggestions in the Letter. Specifically, certain Working Group members believe that CPMI-IOSCO should foster further debate regarding the *Transparency* suggestions, in case they result in (i) inadvertent disclosures of market participant positions or (ii) increases in clearing costs that are not commensurate to risk management benefits.

[5] *Id.*

PART I: EXECUTIVE SUMMARY.

- ***Context***. ISDA members live in a world where a multitude of CCPs exist in every region. ISDA members also live in a world where institutions are looking to better manage and price risk, due to supervisory or regulatory requirements or simply for their own business purposes. Finally, ISDA members live in a world that acknowledges that robust capital markets add value, and that certain forms of risk shifting are integral to the formation, growth, and globalization of such markets. These realities form the context for this request for more granular guidance from CPMI-IOSCO.

- ***More Granular Guidance.*** CPMI-IOSCO should issue more granular guidance on CCP stress testing (the "Guidance"). The purpose of the Guidance would be to clarify the interpretation of existing PFMIs. The Guidance should have the same weight as an Explanatory Note.[6]

- ***Transparency***.[7]

    - In the Guidance, CPMI-IOSCO should clarify that it expects a CCP to publicly disclose, for each clearing service that it offers, all stress testing scenarios, relevant inputs, and the size of the applicable Guarantee Fund. Benefits of such disclosure include, without limitation: (i) providing all current and future market participants with an equal opportunity to form their own views on the soundness of CCP stress testing and (ii) enabling active discussion among academics and policymakers on CCP stress testing, which may yield valuable new insights into CCP risk management as whole.

    - In the Guidance, CPMI-IOSCO should also strongly encourage each CCP to provide additional items of information to clearing members and other market participants that have made a request. ISDA suggests specific items below. These items will permit clearing members and other market participants to model their exposures to CCPs, regardless of whether such exposures are direct or indirect, with greater accuracy. Moreover, these items do not compromise (i) CCP security or integrity or (ii) position confidentiality. ISDA welcomes continued, multilateral conversations

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[6] PFMI section 1.36 explains the organization of the report. According to that section, a Principle sets forth a standard to which CPMI-IOSCO intends to hold a CCP or a relevant supervisor or regulator. A Key Consideration explains the headline standard, and forms a framework against which CPMI-IOSCO intends to assess a CCP or the relevant supervisor or regulator. An Explanatory Note may not form part of the assessment framework, but provides important information on "the objective and rationale of the standard" and "guidance on how the standard can be implemented." *See also*, *e.g.*, CPMI-IOSCO, *Implementation Monitoring of PFMIs – Level 2 Assessment Report for Central Counterparties and Trade Repositories – European Union*, February 2015, available at https://www.bis.org/cpmi/publ/d128.pdf (featuring an assessment framework that explicitly reflects the Principles and the Key Considerations, but not the Explanatory Notes).

[7] *See supra* note 4.

with all other stakeholders on *Transparency*. *See Part II (Transparency)* of this Letter for further discussion.

- ***Governance***.

  - *Risk Committee.* In the Guidance, CPMI-IOSCO should reiterate its expectations under PFMI Explanatory Note 3.2.14, which states: "A CCP…should have a risk committee or its equivalent." Further, CPMI-IOSCO should clarify that portion of the Explanatory Note that states: "the function of a Risk Committee is "[t]o help the <u>[*CCP*] *board*</u> discharge its risk-related responsibilities," and to "<u>*advi*[*se*] *the* [*CCP board*]</u> on the <u>[*CCP's*]</u> overall current and future risk tolerance and strategy" (emphasis added). First, where the CCP Board of Directors (the "CCP Board") has a Risk Subcommittee, CPMI-IOSCO should clarify the respective roles and responsibilities of the Risk Subcommittee and any advisory Risk Committees. Second, CPMI-IOSCO should state that a Risk Committee provides an expert opinion to the CCP Board regarding current and future CCP risk tolerance and strategy. The Risk Committee does not represent the interests of stakeholders. Third, CPMI-IOSCO should consider stating that a Risk Committee should be composed of experts that can provide the type of current, technical advice that the CCP Board may find useful. In general, those experts do not sit on CCP Boards and consequently do not necessarily sit on Risk Subcommittees.

  - *Stakeholder Consultation.*[8] Because the Risk Committee does not represent stakeholder interests, it should not be seen as an avenue for the CCP Board to obtain information about such interests. Rather, in the Guidance, CPMI-IOSCO should require that a CCP have additional procedures that would enable its clearing members and other market participants to communicate their "legitimate interests"[9] to applicable CCP management, the Risk Committee, and ultimately the CCP Board (the "Stakeholder Consultation"). Depending on the issue, the Stakeholder Consultation can take many forms (*e.g.*, verbal, written, or ballot). However, if the CCP rejects the recommendations of the Stakeholder Consultation (or, for that matter, the Risk Committee), then the CCP should explain its rationale. A Stakeholder Consultation would significantly advance current CCP risk management discussions, such as those pertaining to the clearing of products with less liquidity and the potential impact of such clearing on the CCP default management process. *See Part III* (*Governance*) of this Letter for further discussion.

- ***Best Practices***. In the Guidance, CPMI-IOSCO should set forth specific best practices that it expects a CCP to incorporate in stress testing (the "Best Practices"). Such Best Practices

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[8] This Letter uses the term "stakeholders" to refer to (i) direct clearing members and (ii) "participants" (as such term is defined *supra* note 2).

[9] PFMI 2 (*Governance*), Key Consideration 7 states: "The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders."

would address, among other things, how a CCP (i) chooses stresses to model (*e.g.*, historical, hypothetical, and/or theoretical), (ii) constructs stress testing scenarios (*e.g.*, consideration of permissible correlations), and (iii) applies stress testing results in sizing the Guarantee Fund (*e.g.*, evaluation of the propriety of Cover 1, Cover 2, or Cover *N*). CPMI-IOSCO should unequivocally state that all such Best Practices are minimum standards, and that it expects a CCP to adopt more stringent standards if needed due to its risk profile. Nevertheless, CPMI-IOSCO should also permit a CCP to depart from the Best Practices, so long as the CCP abides by those sections of the Letter pertaining to *Transparency* and *Stakeholder Consultation*. ISDA recognizes that there must be a balance between flexibility and uniformity in CCP stress testing, and welcomes continued, multilateral conversations with all other stakeholders on the Best Practices. *See Part III (Best Practices)* of this Letter for further discussion.

- ***Responsibilities for Relevant Authorities***.

  - The PFMIs emphasize in Responsibility E the importance of cooperation between different authorities "in promoting the safety and efficiency of [CCPs]." Key Consideration 5 further states: "At least one authority should ensure that the FMI is periodically assessed against the principles and should, in developing these assessments, consult with other authorities that conduct the supervision or oversight of the FMI and for which the FMI is systemically important."

  - In its 2014 Work Programme, the European Securities and Markets Authority ("ESMA") gave some indication on how it intended to comport with the PFMIs. It stated that "[t]hrough its participation in Central Counterparty (CCP) colleges, ESMA will ensure the consistent application of regulatory requirements across CCPs and will ensure common working procedures for the different colleges of national supervisors, in order to achieve strong supervision and a level playing field." More importantly, ESMA stated that it "will…run annual EU wide stress tests for CCPs to ensure an adequate and consistent coverage by all EU CCPs of similar risks they might face."[10]

  - ISDA believes that the ESMA proposal has merit. In the Guidance, CPMI-IOSCO should further interpret Responsibility E so as to encourage supervisors and regulators to cooperate across the G-20 jurisdictions to develop a set of standardized, hypothetical CCP stresses (the "Standardized Regulatory Stress Scenarios").[11] These

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[10] ESMA, 2014 Work Programme, available at http://www.esma.europa.eu/content/ESMA-2014-Work-Programme.

[11] Although the majority of the Working Group members (particularly, clearing members) support this request for Guidance, specific Working Group members (including one member of the buy-side) believe that the Standardized Regulatory Stress Scenarios may be impracticable given the question of whether supervisors and regulators currently have the capacity to devise and maintain the Standardized Regulatory Stress Scenarios. Further, these specific Working Group members have raised two arguments against the CCP Standardized Regulatory Stress Scenarios, both of which are similar to arguments that market participants had raised when the prudential regulators had been contemplating the Comprehensive Capital Analysis and Review ("CCAR"). First, specific Working Group members believe that since supervisors and regulators would be primarily responsible for creating the Standardized

scenarios should reflect macro-economic events of particular concern (*e.g.*, default on sovereign debt). Supervisors and regulators should refresh the Standardized Regulatory Stress Scenarios on an annual basis, and should test CCP resources against such scenarios on an annual basis. For the avoidance of doubt, supervisors and regulators should not disclose such scenarios to CCPs until the assessment process begins (thus preventing a CCP from risk managing to the Standardized Regulatory Stress Scenarios). If a CCP has insufficient financial resources to cover clearing member default(s) resulting from the application of the Standardized Regulatory Stress Scenarios, then the authority (or authorities) with primary supervisory or regulatory power over the CCP should have the ability to ensure that the CCP ameliorates the inadequacy. The Guidance should emphasize that it is important for supervisors and regulators to apply the Standardized Regulatory Stress Scenarios in a consistent manner to any CCP that is or is seeking to become a qualified CCP. *See Part IV (Responsibilities for Relevant Authorities)* of this Letter for further discussion.

PART II: TRANSPARENCY.[12]

- ***Principle***. In the Guidance, CPMI-IOSCO should clarify that it expects a CCP to publicly disclose, for each clearing service that it offers, all stress testing scenarios, relevant inputs, and the size of the applicable Guarantee Fund. CPMI-IOSCO should also strongly encourage each CCP to provide additional items of information to clearing members and other market participants that have made a request. ISDA suggests the specific items below. These items will permit clearing members and other market participants to model their exposures to CCPs with greater accuracy, while still respecting (i) CCP security or integrity or (ii) position confidentiality. ISDA welcomes continued, multilateral conversations with all other stakeholders on *Transparency*.

- ***Explanation***.

The PFMIs acknowledge the importance of CCP transparency.[13] CCP transparency is crucial to “inform[ing] sound decision making” and “foster[ing] confidence” between the CCP, its clearing members, and other market participants, as well as between supervisors, regulators,

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Regulatory Stress Scenarios, there is the risk that supervisors or regulators may lose objectivity. Second, specific Working Group members believe that Standardized Regulatory Stress Scenarios may create misconceptions regarding the safety of a CCP amongst market participants, and may require supervisors and regulators to contextualize the results (*e.g.*, explaining, for a particular year, that the Standardized Regulatory Stress Scenarios were so severe that supervisors and regulators would expect a certain percentage of CCPs to fail).

[12] A few Working Group members do not support this request for Guidance. Specifically, certain Working Group members (including one member of the buy-side) believe that CPMI-IOSCO should foster further debate regarding the *Transparency* suggestions, in case they result in (i) inadvertent disclosures of market participant positions or (ii) increases in clearing costs that are not commensurate to risk management benefits.

[13] *See*, *e.g.*, PFMI Footnote 18 (stating that “For example, the roles of governance and transparency in managing risk and supporting sound public policy are addressed in Principle 2 and 23, respectively. Because of the general importance and relevance of governance and transparency, they are also referred to in several other principles.”).

and the public.[14] As PFMI Explanatory Note 3.23.1 states: "An FMI should provide sufficient information to its participants *and prospective participants* to enable them to identify clearly and understand fully the risks and responsibilities of participating in the system" (emphasis added). ISDA notes that there may be no principled way to distinguish between *prospective participants* and the public.

ISDA recognizes that CPMI-IOSCO has done an enormous amount of work in increasing CCP transparency to the public, most recently through publishing the *Public Quantitative Disclosure Standards for Central Counterparties* in February 2015.[15] However, there is still more to be done. Specifically, the Guidance should clarify that CPMI-IOSCO expects a CCP to publicly disclose, for each clearing service that it offers, all stress testing scenarios, relevant inputs, and the size of the applicable Guarantee Fund. Benefits of such disclosure include, without limitation: (i) providing all current and *prospective participants* with an equal opportunity to form their own views on the soundness of CCP stress testing and (ii) enabling active discussion among academics and policymakers on CCP stress testing, which may yield valuable new insights into CCP risk management as a whole.

ISDA believes that information over and above what a CCP makes available to the public would help clearing members and *current*[16] market participants that have made a request.[17] After all, Working Group members are from the Risk Function. As such, they have a responsibility to "understand and manage" the exposure that acting as a clearing member or participating in the derivatives markets brings to their institutions. In discharging their responsibility, the members of the Risk Function have two primary goals. First, they would like to assure themselves that a CCP (i) is adequately sizing its Guarantee Fund(s) relative to Cover *N* (as described in the Best Practices) and (ii) is adequately justifying the appropriateness of its assumptions around Cover *N*. That is because members of the Risk Function would like to ensure that the CCP has sufficient pre-funded resources to cover its potential exposures during a stressed market, so as to minimize the risk of unfunded loss allocation during such stress. Second, members of the Risk Function would like to make certain that their institutions are able to stress their own liabilities at any particular CCP. That is because members of the Risk Function would like to ensure that their institutions are able to "measure, manage and control

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[14] *See*, *e.g.*, Preamble to PFMI 23 (*Transparency*).

[15] *See* CPMI-IOSCO, *Public Quantitative Disclosure Standards for Central Counterparties*, February 2015 (available at http://www.bis.org/cpmi/publ/d125.pdf) (the "Disclosures").

[16] For any point in time, *current* as opposed to *prospective*. *See supra* note 2.

[17] In fact, the PFMIs seem to agree that a CCP should provide information to clearing members and other market participants over and above what it gives to the public. For example, PFMI 23 (*Transparency*) states that a CCP should provide clearing members or other market participants with "sufficient information" to enable "an accurate understanding of the risks," but also the "fees, and other material costs they incur by participating in the FMI." PFMI Explanatory Note 3.23.4 explains what would constitute "sufficient information" with respect to CCP stress testing. It says: "An FMI should disclose to each individual participant stress test scenarios used, individual results of stress tests, and other data to help each participant understand and manage the potential financial risks stemming from participation in the FMI."

their potential exposure"[18] during business as usual and in times of stress. Certain Working Group members are prudentially regulated, and are required to measure and manage the stressed exposure of their institutions to a CCP. However, it is currently challenging to measure such exposure without more information.

Currently, CCPs vary greatly in the degree to which they permit members of the Risk Function to achieve these two goals. For example, some CCPs provide each stress testing scenario and all relevant assumptions and methodologies, whereas other CCPs simply share the name for and a general description of each stress testing scenario. Broadly speaking, CCPs disclose the absolute size of their Guarantee Fund(s), but do not share much information on stress losses.[19]

- ***Specific Request.***

CPMI-IOSCO should issue Guidance clarifying PFMI Explanatory Note 3.23.4. Specifically, the Guidance should state that a CCP is expected to publicly disclose the items listed below. If a CCP offers multiple clearing services, then it should provide the items for each clearing service.

  - *Scenarios.* All historical scenarios and the assumptions, risk factors, and shock levels for hypothetical/theoretical scenarios.

  - *Inputs.* For both historical and hypothetical/theoretical scenarios, all relevant pricing data, correlations, and liquidity conditions. As the Best Practices mention, a CCP should scale historical prices to reflect current market prices and volatility.

  - *Guarantee Fund.* The size of the Guarantee Fund for that particular clearing service (assuming limited recourse).

In the Guidance, CPMI-IOSCO should strongly encourage each CCP to provide additional information to clearing members and other market participants that have made a request. Set forth below are some suggestions. These items will permit clearing members and other market participants to model their exposures to CCPs, whether direct or indirect, with greater accuracy. ISDA observes that all stakeholders have an incentive to protect CCP integrity and security. Furthermore, ISDA maintains that all stakeholders have an interest in safeguarding position confidentiality.

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[18] CPMI-IOSCO, *Recovery of Financial Market Infrastructures*, October 2014 (available at: http://www.bis.org/cpmi/publ/d121.pdf).

[19] Item 4.4 of the Disclosures state: "In order to aid clearing members' modelling of their exposures to the CCP, the CCP should consider disclosing further information on its default fund stress-testing methodology (eg underlying model parameters and assumptions) insofar as the CCP, *in discussion with its participants and regulators*, agrees is appropriate without providing confidential information about individual participant positions" (emphasis added). This Letter should be viewed as an attempt by ISDA to initiate such a discussion at a supra-national level.

- *Stress Results.* The Disclosures will provide the public with some information on stress losses that the CCP may suffer.[20] It would be useful for the CCP to provide additional information on stress losses in the form of quarterly reports.

    - Specifically, it would be valuable to have trend data on daily CCP uncollateralized stress losses (the single largest and the aggregate of the two largest uncollateralized stress losses).

    - Additionally, it would be beneficial to have the following information, arranged in each case from highest to lowest:

        - the largest uncollateralized stress loss for each clearing member (across scenarios), without identifying the scenario or the clearing member, to determine an approximate distribution of maximum clearing member stress losses;

        - the largest uncollateralized stress loss for each pair of clearing members (across the stress scenarios), without identifying the scenario or either clearing member, to determine an approximate distribution of maximum stress losses for two members defaulting simultaneously; and

        - the distribution of uncollateralized stress losses across all clearing members for each scenario, without identifying the scenario or clearing member.

With this information, clearing members and other market participants would be better able to monitor the level and volatility of stress losses at any particular CCP and for any clearing service. Such entities would also derive some visibility into the distribution of risk. Position confidentiality can be maintained since the reports contain (i) trend data and (ii) data on uncollateralized stress losses without identifying the specific scenario or the clearing members. It is important to note, however, that while such quarterly reports would be helpful to clearing members (and other market participants) in evaluating the appropriateness of Guarantee Fund sizing, such reports do not contain all information necessary for clearing members to perform an accurate modeling of their own contingent liabilities.

- *Assessments.* In order to fulfill their responsibilities under law and regulation, clearing members need to estimate the maximum amount that the CCP may assess against them in relation to any particular clearing service.

    - Currently, clearing members are discussing what additional items of information they would need from a CCP in order to model and report on their

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[20] *See* Appendix A to this Letter.

contingent liabilities (*e.g.*, assessments), while minimizing any concern over the confidentiality of positions.

- In the meantime, clearing members would like the Guidance to require that a CCP dedicate a section of its rulebook to delineating, for each clearing service, all the powers and authorities that it has to cause contingent liabilities to clearing members (*e.g.*, assessments, replenishments). That section should explain how a CCP may exercise such powers and authorities, thereby highlighting contingent liabilities that might be cumulative (rather than exclusive). That section should also state that its provisions are controlling, notwithstanding anything to the contrary anywhere else in the rulebook (including any provision on CCP emergency powers). A CCP should make that section easy to identify and access (through, *e.g.*, a dedicated and prominent link on its homepage).

- In general, ISDA believes that clearing members, other market participants, and each CCP should have the same *ex ante* understanding of all the powers and authorities that a CCP may exercise in a time of crisis (*e.g.*, when one or more clearing members have defaulted to the CCP). Otherwise, confusion and conflict may prevail in the market at precisely its weakest time – namely, when the market is suffering from idiosyncratic and/or systemic stress.

o *Reverse Stress Testing Results.* The PFMIs state that reverse stress testing could be a useful CCP risk management tool. Clearing members agree and have included reverse stress testing in the Best Practices. Assuming that a CCP conducts reverse stress testing, then it should disclose, for each stress testing scenario that it applies to each particular clearing service, the number of clearing member defaults that would result in exhaustion of all pre-funded and pre-committed resources (*e.g.*, relevant initial margin, Guarantee Fund(s), assessments) for that clearing service.[21] For the avoidance of doubt, in making such disclosure, the CCP would not identify the scenario or the relevant clearing member(s).

o *Validation*. The Best Practices state that a CCP should obtain a full validation of its stress testing methodologies. Such a validation should be conducted by a third party on at least an annual basis. Assuming that a CCP obtains such validation, it should disclose the following information to clearing members and other market participants that have made a request: (i) the name of the independent party; (ii) a summary of the qualifications of that party; (iii) the validation approach taken by that party; and (iv) the results of such validation. Clearing members and other market participants can then rely on the Stakeholder Consultation to ask the CCP questions (many of which

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[21] Please see *Part IV: Best Practices for CCP Stress Testing* for more detail on reverse stress testing. ISDA is cognizant of PFMI Explanatory Note 3.4.23, which states: "Reverse stress testing should be considered a helpful management tool but need not, necessarily, drive the CCP's determination of the appropriate level of financial resources." *See also* PFMI Explanatory Note 3.7.16 (on reverse stress testing for *Liquidity Risk*).

may be for clarification purposes).

<u>PART III: GOVERNANCE</u>.[22]

- ***Principle.***

  - *Risk Committee.* In the Guidance, CPMI-IOSCO should reiterate its expectations under PFMI Explanatory Note 3.2.14, which states: "A CCP…should have a risk committee or its equivalent." Further, CPMI-IOSCO should clarify that portion of the Explanatory Note that states: "the function of a Risk Committee is "[t]o help the [*CCP*] *board* discharge its risk-related responsibilities," and to "*advi*[*se*] *the* [*CCP board*] on the [*CCP's*] overall current and future risk tolerance and strategy" (emphasis added).[23] The Risk Committee does not represent the interests of stakeholders.

  - *Stakeholder Consultation.* Because the Risk Committee does not represent stakeholder interests, it should not be seen as an avenue for the CCP Board to obtain information about such interests. Rather, in the Guidance, CPMI-IOSCO should require that a CCP implement the Stakeholder Consultation (*i.e.*, additional procedures that would enable its clearing members and other market participants to communicate their "legitimate interests"[24] to applicable CCP management, the Risk Committee, and ultimately the CCP Board). If the CCP rejects the recommendations of the Stakeholder Consultation (or, for that matter, of the Risk Committee), then the CCP should explain its rationale.

- ***Explanation.***

The PFMIs acknowledge the importance of governance in ensuring adequate CCP risk management.[25] A Risk Committee or its equivalent is fundamental to CCP governance. Indeed, PFMI Explanatory Note 3.2.14 states, "A CCP…*should have*…a risk committee or its equivalent" (emphasis added). In contrast, for financial market infrastructures that are not CCPs, the same PFMI Explanatory Note simply states that "…an FMI *should consider the case* for a risk committee" (emphasis added). Working Group members note that not all CCPs have Risk Committees, despite the significance accorded in the PFMIs.

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[22] Certain Working Group members are working on a more detailed discussion on CCP Governance, which they hope to share with CPMI-IOSCO.

[23] PFMI Explanatory Note 3.2.14.

[24] PFMI 2 (*Governance*), Key Consideration 7 states: "The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders."

[25] *See, e.g.*, PFMI Footnote 18 (stating that "For example, the roles of governance and transparency in managing risk and supporting sound public policy are addressed in Principle 2 and 23, respectively. Because of the general importance and relevance of governance and transparency, they are also referred to in several other principles.").

Even when a CCP has a Risk Committee, market participants are confused regarding its exact function in CCP governance. First, certain CCP Boards have a Risk Subcommittee, but those CCPs may also have advisory Risk Committees. It would be helpful for CPMI-IOSCO to clarify the respective roles and responsibilities of the Risk Subcommittee and any advisory Risk Committees. Second, many market participants believe that a Risk Committee represents the interests of the clearing members and their clients or customers. That is not the case. As PFMI Explanatory Note 3.2.14 acknowledges, a Risk Committee is designed "[t]o help the [*CCP*] *board* discharge its risk-related responsibilities," and to "advi[se] the [*CCP board*] on the [*CCP's*] overall current and future risk tolerance and strategy" (emphasis added). In other words, the Risk Committee gives a CCP an expert opinion on current and future CCP risk tolerance and strategy. But the Risk Committee is not a mechanism for the CCP to ascertain the "legitimate interests of its direct and indirect participants and other stakeholders."[26] First, not all stakeholders have a Risk Committee seat.[27] Second, stakeholders have many "legitimate interests" outside of opining on the risk tolerance and strategy taken by any particular CCP. For example, let us assume that two CCPs clear economically equivalent products. Clearing members in both CCPs have a "legitimate interest" in ensuring that they can anticipate and control their exposure to each CCP.

The clearing of products with less liquidity (the "Less Liquid Products") constitutes a concrete example where current CCP governance arrangements, including the Risk Committee, may not result in adequate consideration for the "legitimate interests" of stakeholders. The Less Liquid Products are risk-correlated to products that have more liquidity and are already subject to mandatory clearing. The clearing of Less Liquid Products may result in margin efficiencies for market participants when a CCP is operating in normal market conditions. But it is difficult to model the risks of a Less Liquid Product, especially for purposes of ensuring the adequacy of the Guarantee Fund and other financial resources. For example, let us assume that two CCPs clear the Less Liquid Products, and that two clearing members with the Less Liquid Products in their portfolios default. In this situation, both CCPs face a very real possibility that surviving clearing members would not have the capacity to provide offsets for the Less Liquid Products, and that the CCPs would therefore have to access and perhaps deplete their Guarantee Fund(s).

The clearing of Less Liquid Products illustrates the need for the Stakeholder Consultation. A CCP must understand potential limits to market depth in a time of stress, and

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[26] *See supra* note 24.

[27] Only as an example, a CCP may not permit representatives employed by all G-SIB (*i.e.*, globally systemically important banks) clearing members to sit on its Risk Committee. A CCP may have many important and legitimate reasons for such a decision. But the result is that one or more G-SIB clearing members may not have a mechanism to provide any input into CCP risk management.

It is true that a clearing member can discontinue its activities at any CCP if it determines that its risks outweigh its rewards. However, ISDA respectfully submits that neither the short-term nor the long-term impact (on, *e.g.*, (i) the availability or pricing of hedging or (ii) on capital markets formation in emerging economies) of such a discontinuation has yet been definitively quantified.

therefore it needs to obtain information from stakeholders that are not on the Risk Committee. Currently, certain CCPs are undertaking *ad hoc* market surveys to ascertain these limits. But it would be better for each CCP to have procedures that would enable its clearing members and other market participants to more routinely communicate their "legitimate interests"[28] – whether on the Less Liquid Products or otherwise -- to applicable CCP management, the Risk Committee, and ultimately the CCP Board. Depending on the issue, the Stakeholder Consultation can take many forms (*e.g.*, verbal, written, or ballot). However, if the CCP rejects the recommendations of the Stakeholder Consultation (or, for that matter, of the Risk Committee), then it should explain its rationale. For the Less Liquid Products, a CCP could structure the Stakeholder Consultation to enable clearing members to provide guidance on the amount of risk they would be prepared to absorb in the case of clearing member default (assuming Cover 2). The guidance could be refreshed on a quarterly basis to ensure that it reflects current market conditions. If a CCP decides to clear more risk than the aggregate amounts supplied by the clearing members for that quarter (net of Cover 2), then there would be automatic increases in initial margin. The CCP can re-evaluate each quarter based on the most recent data.

- ***Specific Request.***

    - *Risk Committee.* In the Guidance, CPMI-IOSCO should reiterate its expectations under PFMI Explanatory Note 3.2.14, which states: "A CCP…should have a risk committee or its equivalent." Further, CPMI-IOSCO should clarify that portion of the Explanatory Note that states: "the function of a Risk Committee is "[t]o help the <u>[*CCP*] *board*</u> discharge its risk-related responsibilities," and to "<u>*advi*[*se*] *the* [*CCP board*]</u> on the <u>[*CCP's*]</u> overall current and future risk tolerance and strategy" (emphasis added). First, where the CCP Board has a Risk Subcommittee, CPMI-IOSCO should clarify the respective roles and responsibilities of the Risk Subcommittee and any advisory Risk Committees. Second, CPMI-IOSCO should state that a Risk Committee provides an expert opinion to the CCP Board regarding current and future CCP risk tolerance and strategy. The Risk Committee does not represent the interests of stakeholders. Third, CPMI-IOSCO should consider stating that a Risk Committee should be composed of experts that can provide the type of current, technical advice that the CCP Board may find useful. In general, those experts do not sit on CCP Boards and consequently do not necessarily sit on Risk Subcommittees.

    - *Stakeholder Consultation.* Since the Risk Committee does not represent stakeholder interests, it should not be seen as an avenue for the CCP Board to obtain information about such interests. Rather, in the Guidance, CPMI-IOSCO should require that a CCP implement the Stakeholder Consultation. Depending on the issue, the Stakeholder Consultation can take many forms (*e.g.*, verbal, written, or ballot).[29]

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[28] *See supra* note 24.

[29] *See*, *e.g.*, the above suggestion on the form that a Stakeholder Consultation may take for the Less Liquid Products.

However, if the CCP rejects the recommendations of the Stakeholder Consultation (or, for that matter, the Risk Committee), then the CCP should explain its rationale.

PART IV: BEST PRACTICES FOR CCP STRESS TESTING.

- ***Principle.*** In the Guidance, CPMI-IOSCO should set forth specific Best Practices for CCP stress testing. However, CPMI-IOSCO should unequivocally emphasize that all such Best Practices are minimum standards, and that CPMI-IOSCO expects a CCP to adopt more stringent standards if needed due to its risk profile. Nevertheless, CPMI-IOSCO should also permit a CCP to depart from the Best Practices, so long as the CCP abides by those sections of the Letter pertaining to *Transparency* and *Stakeholder Consultation*. ISDA appreciates that there must be a balance between flexibility and uniformity in CCP stress testing, and welcomes continued, multilateral conversations with all other stakeholders on the Best Practices.

- ***Explanation*.**

Although the PFMIs emphasize the importance of stress testing to sizing CCP financial resources (in amount[30] and liquidity[31]), the PFMIs provide very little guidance on the standards that a CCP should follow in choosing stresses to model, in constructing stress scenarios, and in sizing Guarantee Fund(s) based on stress results.[32] Given that CCPs may clear different products, have different participants, and face different market conditions, there is justification for a measure of flexibility in CCP stress testing. Nevertheless, in order to guarantee that CCP stress testing practices are appropriately conservative,[33] there must also be some constraints. The suggested Best Practices are meant to strike a reasonable balance between (i) the need for CCP flexibility and (ii) the need for some uniformity among CCP risk tolerances. Some uniformity

[30] PFMI 4 (*Credit Risk*) states that "[a] CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing."

[31] Similarly, PFMI 7 (*Liquidity Risk*) says that "[a]n FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing."

[32] Neither PFMI 4 (*Credit Risk*) nor PFMI 7 (*Liquidity Risk*) provides guidance on how a CCP should determine the universe of "extreme but plausible market conditions." Neither PFMI describes what would constitute "rigorous stress testing." Rather, PFMI 4 (*Credit Risk*) and PFMI 7 (*Liquidity Risk*) both contain general statements such as: "In conducting stress testing, an FMI [including a CCP] *should consider* a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions" (emphasis added)."

[33] ISDA recognizes that there are ways other than the Best Practices to ensure that CCP stress testing is appropriately conservative. For example, CCP capital contributions may be structured so as to incentivize conservative risk management. However, ISDA notes that a degree of uniformity may (i) facilitate mutual recognition between G-20 jurisdictions, (ii) contribute to discussions on interoperability, and (iii) preserve the global nature of the derivatives markets.

may, among other things, facilitate CCP mutual recognition between G-20 jurisdictions, and may consequently lead to offsetting benefits. As mentioned above, ISDA welcomes further multilateral dialogue with all stakeholders on the Best Practices.

- ***Specific Requests.***

  - *Explanation.* In this section, ISDA sets forth Best Practices that it would like CPMI-IOSCO to include in Guidance. However, notwithstanding anything to the contrary herein, a CCP should have some flexibility to depart from the Best Practices, if the CCP can explain how such departure is appropriate given, *e.g.*, any idiosyncrasies in products, participants, and market conditions. In so explaining, a CCP should comport with those sections of the Letter pertaining to *Transparency* and *Governance*, so as to give all stakeholders a chance to consider the departure and to provide feedback, if such stakeholders wish. Working Group members observe that permitting a CCP the opportunity to depart from the Best Practices appears congruent with the Guidance having the weight of an Explanatory Note.

  - *Guarantee Funds with Limited Recourse*. Working Group members are cognizant that certain CCPs maintain separate Guarantee Funds for different derivatives products, and that such Guarantee Funds are structured to be limited recourse. In Guidance, CPMI-IOSCO should clarify that a CCP with such a structure should devise stress tests for (i) each individual clearing service as well as (ii) all clearing services together. In that manner, any constraints on limited recourse may be illuminated.[34]

  - *Types of Scenarios.* Currently, most CCPs use historical stress scenarios (*e.g.*, 1987 Stock Market Crash or 2008 Financial Crisis). In general, such use is appropriate, since what has happened in the past may happen again (unless market structure and conditions have fundamentally altered). However, CPMI-IOSCO should make plain that it expects a CCP to go beyond historical scenarios, and to construct and rely on hypothetical/theoretical stress scenarios.[35] This standard appears logical since past performance is not necessarily indicative of future returns (or losses). In sum, CPMI-IOSCO should emphasize the importance of a CCP designing stress scenarios that comprehensively address past, present, and future risk factors for its current or anticipated clearing activities.

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[34] For example, assume that a clearing member participates in CCP Clearing Service A whereas its affiliate participates in CCP Clearing Service B. The CCP may want to consider in its stress testing construction on how the default of clearing member in CCP Clearing Service A might affect the activity of its affiliate in CCP Clearing Service B.

[35] Certain CCPs appear to agree that it is important to have both historical and hypothetical/theoretical stress testing scenarios. *See, e.g.*, the European Association of CCP Clearing Houses, *Best Practices for CCP Stress Tests*, April 2015 (available at: http://www.eachccp.eu/SiteAssets/150507%20-%20EACH%20paper%20-%20Best%20practices%20for%20CCPs%20stress%20tests%20-%20April%202015.pdf); LCH.Clearnet, *Stress This House: A Framework for the Standardised Stress Testing of CCPs*, (available at: http://www.lchclearnet.com/documents/731485/762444/Stress+Testing+Final+Paper+1.pdf) (the "LCH Paper").

- *Construction of Scenarios*. In the Guidance, CPMI-IOSCO should state that it expects CCPs to hew to certain minimum standards in choosing which stresses to model and in constructing stress scenarios. Those standards are set forth below.

    - *Historical Scenarios*.

        - *Look-Back Period*. In identifying historical scenarios, a CCP should look back the longer of 30 years or all available history[36] for any applicable (i) derivative product or set of products or (ii) underlying references (or components thereof, if such references are indices).

            - Certain products (*e.g.*, emerging market products) may have less than a 30-year history. In that event, CPMI-IOSCO should encourage (through Guidance) a CCP that is contemplating clearing those products to construct and rely on hypothetical scenarios rooted in the volatility of similar products or markets with a 30-year history.

            - Notwithstanding the above, a CCP should have the opportunity to exclude a historical scenario on the basis that it is no longer relevant or plausible (*e.g.*, fundamental change in market structure). A CCP should comport with those sections of the Letter addressing *Transparency* and *Governance*, so as to give all stakeholders a chance to consider this exclusion and to provide feedback, if such stakeholders wish.

        - *Scaling and Magnitude*. A CCP should scale historical prices to reflect current market prices and volatility. Moreover, in determining which stress loss to apply in sizing the Guarantee Fund, the most conservative approach that a CCP may take is to look to the maximum historical loss rather than the loss at any specific confidence interval (*e.g.*, 99.0% or 99.5%).[37]

    - *Hypothetical/Theoretical Scenarios.*[38]

        - *Hypothetical Scenarios.* A CCP should consider incorporating two types of hypothetical scenarios in its stress testing.

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[36] A few Working Group members (including one member of the buy-side) do not support this suggestion. Specifically, certain Working Group members believe that these suggestions may lead to increases in clearing costs that are not commensurate to risk management benefits.

[37] *Id.*

[38] *See supra* note 35.

- First, the CCP should identify certain macro-economic events that would most likely result in a severely adverse shock (*e.g.*, the collapse of the Euro or unsuccessful debt ceiling negotiations within the United States). The CCP should translate these macro-economic events into hypothetical scenarios by assuming that various price correlations between asset classes decompose. The CCP should then identify the universe of decomposition scenarios that would be considered severely adverse given the risks specific to the CCP.

- Second, apart from deriving hypothetical scenarios from macro-economic events, a CCP should also construct hypothetical scenarios that reflect idiosyncratic risks of (i) the derivatives products or sets of products or (ii) the underlying references (or components thereof, if the underlying references are indices). For example:

  - A CCP may clear products with characteristics that render them susceptible to large price movements over short periods of time (*e.g.*, those products in which high-frequency trading has been observed). That CCP should consequently construct hypothetical scenarios that specifically incorporate the idiosyncratic risks posed by such movements (*e.g.*, "extreme but plausible" variations on the May 10, 2010 "flash crash" or the October 2014 market dislocation).

  - A CCP may need to address product specific risks such as wrong-way risk between credit default swaps ("CDS") and certain equity products.

- *Theoretical Scenarios.* A CCP should consider including stress testing scenarios driven by statistics (*e.g.*, scenarios derived from a specific standard deviation or based on antitheticals).[39]

- *All Scenarios.* In general, CPMI-IOSCO should provide more specific Guidance on how a CCP should consider the effects of various kinds of dynamic interconnections in identifying which stresses to model, in constructing stress scenarios, and in sizing its Guarantee Fund(s) based on stress results.

[39] *Id.*

- *Holding Periods.* Broadly speaking, CCP stress scenarios should not assume a static holding period. Rather, CCP stress scenarios should acknowledge that the holding period is dynamic, and that it may change depending on product liquidity, market concentration, and directionality of open interest. It may also change depending on the other services that one or more defaulting clearing members may be providing to the CCP (*e.g.*, liquidity, settlement, and/or custodian services). Therefore, a CCP should explicitly consider such interconnections in determining relevant holding periods. One method of introducing more dynamism would be to have the CCP compare (i) the holding period associated with a specific stress scenario to (ii) the results of a CCP default management fire drill that presupposes the exact same stress scenario.[40]

    - *Margin Period of Risk ("MPOR")*. Under many stress scenarios, the CCP would be able to hedge the proprietary and/or customer or client portfolios of a defaulting clearing member. Consequently, for those stress scenarios, the holding period should accord with the MPOR. However, such hedges may be imperfect leading to "open risk" before the complete disposition (*i.e.*, through auction or porting, as applicable) of the proprietary and/or customer or client portfolios of the defaulting clearing member. To account for this risk, a CCP should assume that it will hold the resulting basis risk for longer than MPOR. CPMI-IOSCO should clarify in Guidance that a CCP should employ the Stakeholder Consultation to determine what would be an appropriate holding period, and that the CCP should present its findings in its discussions with relevant supervisors and regulators.

    - *Porting or Liquidation of Customer or Client Portfolios.* ISDA believes that a CCP should provide greater disclosure on whether its initial margin methodology assumes that it (i) will liquidate all customer and/or client positions or (ii) will attempt to port over a number of days all or a portion of such positions (and collateral) to one or more surviving clearing members. In determining the holding period for stress scenarios, a CCP may wish to be conservative in estimating both the customer or client positions (and collateral) that can be ported and the time in which such porting may be accomplished. Currently, a CCP

[40] To maximize the utility of its default management fire drill, a CCP should consider trying to replicate (as far as possible) the market conditions for a specific stress scenario, with traders bidding accordingly. Additionally, the CCP should take into account the treatment of customer or client positions and/or collateral (*e.g.*, whether the scenario, coupled with relevant legal constructs (such as the segregation regime), would permit a CCP to (i) hedge and then port, (ii) hedge and then auction, or (iii) combine (i) and (ii)).

may face a number of constraints in effectuating client or customer porting. Such constraints include: (i) clearing member capacity in terms of capital/balance sheet; (ii) certain clients and/or customers not having committed lines from back-up clearing members (such lines increase the likelihood of porting); and (iii) the potential inadequacy of any available lines due to movement in the risk profile of the client and/or customer portfolio during a stressed environment. Therefore, a CCP should make sure that its Guarantee Fund calculations (i) cover stressed losses on all client or customer portfolios and (ii) incorporate conservative assumptions on the amount of time that a CCP would need to manage client or customer portfolios.

- *Feedback Loop.* In supplementing historical stress scenarios with hypothetical/theoretical scenarios, a CCP should consider the degree to which the default of one or more clearing member(s) could itself constitute a stress event or could amplify the original stress event. For example, the default of one clearing member could have a severely adverse impact on market liquidity, thereby significantly increasing estimated CCP default management costs.[41] Particularly for a CCP with concentrated membership, a default of a large clearing member may result in market dislocations that will exceed any stresses observed historically. A CCP should have a hypothetical stress testing framework to appropriately model such dislocations.

- *Consistent Collateral Valuation.* A CCP should align the stress scenarios that it uses to determine collateral haircuts with those that it applies to clearing member and client or customer portfolios. To the extent that a CCP does not clear the collateral it accepts (*e.g.*, a commodities CCP that accepts sovereign bonds), the CCP should develop corresponding stresses and haircuts for the collateral and apply the Standardized Regulatory Stress Scenarios to the collateral it accepts.

- *Validation*. PFMI Explanatory Note 3.4.21 states: "A full validation of a CCP's risk-management model should be performed at least annually."[42] In the Guidance, CPMI-IOSCO should consider

[41] The CCP has to close out the positions of a defaulting clearing member. Historical price movements (particularly for swaps) tend to be calculated on a "mid-to-mid" basis, which do not take into account the cost of actually closing out positions in a period of decreased liquidity. A CCP can consider addressing this mismatch through a combination of (i) a longer holding period (given risks become more illiquid as they become more concentrated; see section on *Holding Period* above) and (ii) an add-on for bid-ask spread in a stressed market.

[42] *See also* PFMI Explanatory Note 3.7.17, which states "A full validation of an FMI's liquidity risk-management model should be performed at least annually."

clarifying that such validation applies to CCP stress testing, as well as CCP initial margin methodologies, and that such validation should be conducted by independent parties. As mentioned in the *Transparency* section, the CCP should be required to provide some disclosure on such validation to clearing members and other market participants that have made a request. Clearing members and such other market participants can then rely on the Stakeholder Consultation to ask the CCP questions (many of which may be for clarification purposes).

- *Application of Scenarios.*

    - *Minimum Standards.* In the Guidance, CPMI-IOSCO should explicitly state that the Cover 1 or 2 recommendations in PFMI 4 (*Credit Risk*) and the Cover 1 recommendation in PFMI 7 (*Liquidity Risk*) are *minimum* standards that a CCP should follow in determining the size and composition of its Guarantee Fund(s). CPMI-IOSCO should make clear that it expects a CCP to comport with more stringent standards if needed due to its risk profile.

    - *More Stringent Standards (Also Known As Cover N).* If the CCP risk distribution in a particular clearing service or for a specific derivatives product is fairly concentrated, then sizing and composing the Guarantee Fund to cover, *e.g.*, the largest or the two largest clearing member defaults may be adequate. However, the CCP should not assume such a concentrated risk distribution. Rather, the CCP should consider whether sizing and composing the Guarantee Fund to Cover N would be more appropriate. Specifically, for each stress scenario, the CCP should analyze its stress loss distribution by clearing member to determine other "extreme but plausible" default combinations and to evaluate correlation amongst market participants (*e.g.*, five weakest clearing members or largest weak clearing member and three less weak clearing members). For a given stress scenario, a CCP should also take into account the ability of each of its clearing members to withstand calls for additional resources.

- *Reverse Stress Testing*. PFMI Explanatory Note 3.4.23 states in relevant part: "A CCP should conduct, as appropriate, reverse stress tests aimed at identifying the extreme scenarios and market conditions in which its total financial resources would not provide sufficient coverage of tail risk."[43] CPMI-IOSCO should consider reiterating this expectation in Guidance. ISDA is cognizant that PFMI Explanatory Note 3.4.23 also states: "Reverse stress testing should be considered a helpful management tool but need not, necessarily, drive the CCP's determination of the appropriate level of financial resources."

[43] *See also* PFMI Explanatory Note 3.7.16 (on reverse stress testing for *Liquidity Risk*).

- *Utilizing Stress Test Results.*

  - CPMI-IOSCO should consider clarifying in Guidance that a CCP should re-size its Guarantee Fund(s) on at least a monthly, rather than quarterly, basis. This standard accords with the sentiment of PFMI 4 (*Credit Risk*), Key Consideration 5, which states: "On at least a monthly basis, a CCP should perform a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining the CCP's required level of default protection in light of current and evolving market conditions."[44]

  - For the avoidance of doubt, a CCP should have intra-day procedures for calling for additional financial resources should daily stress testing reveal a breach in its Guarantee Fund(s). Such financial resources could be in the form of additional initial margin. Where daily stress testing shows a significant breach, then the CCP should have procedures for intra-month resizing of the Guarantee Fund and for collecting additional contributions.

- *Stress Loss Allocation.*

  - Certain Working Group members are still contemplating whether a Best Practice can be developed for how a CCP should allocate calls for additional financial resources (*e.g.*, as between additional initial margin and additional Guarantee Fund contributions, and as between clearing members with respect to the latter). However, at this point, it seems fair to note that:

    - *Allocation between Initial Margin and Additional Guarantee Fund Contributions.* There is an argument that a CCP should call for additional initial margin (rather than additional Guarantee Fund contributions) if Guarantee Fund breaches can be attributed to risks posed by products with characteristics that render them susceptible to large price movements over short periods of time (*e.g.*, those products in which high-frequency trading has been observed).

    - *Allocation of Additional Guarantee Fund Contributions as between Clearing Members.* The purpose of the Guarantee Fund is to capture the risks of clearing members and other market participants under "extreme but plausible" scenarios that remain uncovered by initial margin. Since the risks that clearing members face under current market conditions do not necessarily correlate to the risks that they will face under stress conditions, a Guarantee Fund allocation scheme based on the proportional uncovered risks of each clearing member may be worth exploring.

[44] *See also* PFMI Explanatory Note 3.7.17 (on frequency of stress testing for *Liquidity Risk*).

PART IV: RESPONSIBILITIES FOR RELEVANT AUTHORITIES.

- ***Principle.*** In the Guidance, CPMI-IOSCO should further interpret Responsibility E so as to encourage supervisors and regulators to cooperate across the G-20 jurisdictions to develop the Standardized Regulatory Stress Scenarios.[45]

- ***Explanation*.**

The PFMIs emphasize in Responsibility E the importance of cooperation between different authorities "in promoting the safety and efficiency of [CCPs]." Key Consideration 5 further states: "At least one authority should ensure that the FMI is periodically assessed against the principles and should, in developing these assessments, consult with other authorities that conduct the supervision or oversight of the FMI and for which the FMI is systemically important."

In its 2014 Work Programme, ESMA gave some indication on how it intended to comport with the PFMIs. It stated that "[t]hrough its participation in Central Counterparty (CCP) colleges, ESMA will ensure the consistent application of regulatory requirements across CCPs and will ensure common working procedures for the different colleges of national supervisors, in order to achieve strong supervision and a level playing field." More importantly, ESMA stated that it "will…run annual EU wide stress tests for CCPs to ensure an adequate and consistent coverage by all EU CCPs of similar risks they might face."[46]

ISDA believes that the ESMA proposal has merit. In the Guidance, CPMI-IOSCO should further interpret Responsibility E so as to encourage supervisors and regulators to cooperate across the G-20 jurisdictions to develop the Standardized Regulatory Stress Scenarios. These scenarios should reflect macro-economic events of particular concern (*e.g.*, default on sovereign debt). By devising the Standardized Regulatory Stress Scenarios and by testing CCP resources against them, supervisors and regulators may obtain a better understanding of cross-jurisdictional system dynamics and their effect on the stress testing of any particular CCP. In that way, supervisors and regulators would best position themselves to ensure that CCPs have

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[45] Although the majority of the Working Group members (particularly, clearing members) support this request for Guidance, specific Working Group members (including one member of the buy-side) believe that the Standardized Regulatory Stress Scenarios may be impracticable given the question of whether supervisors and regulators currently have the capacity to devise and maintain the Standardized Regulatory Stress Scenarios. Further, these specific Working Group members have raised two arguments against the CCP Standardized Regulatory Stress Scenarios, both of which are similar to arguments that market participants had raised when the prudential regulators had been contemplating CCAR. First, specific Working Group members believe that since supervisors and regulators would be primarily responsible for creating the Standardized Regulatory Stress Scenarios, there is the risk that supervisors or regulators may lose objectivity. Second, specific Working Group members believe that Standardized Regulatory Stress Scenarios may create misconceptions regarding the safety of a CCP amongst market participants, and may require supervisors and regulators to contextualize the results (*e.g.*, explaining, for a particular year, that the Standardized Regulatory Stress Scenarios were so severe that supervisors and regulators would expect a certain percentage of CCPs to fail).

[46] ESMA, 2014 Work Programme, available at http://www.esma.europa.eu/content/ESMA-2014-Work-Programme.

enough financial resources to withstand certain levels of stress losses arising from one or more member defaults (*i.e.*, appropriate Cover N).

To be clear, CPMI-IOSCO should state that any application of the Standardized Regulatory Stress Scenarios should be seen as a complement to and an enhancement of the stress testing framework of each individual CCP, and should not be seen as sufficient on its own to discharge the risk management obligations of a CCP. After all, the Standardized Regulatory Stress Scenarios would not be tailored to the unique characteristics of CCPs.

- ***Specific Request.*** Set forth below are suggestions for the design and application of the Standardized Regulatory Stress Scenarios.

    - In the Guidance, CPMI-IOSCO should further interpret Responsibility E so as to encourage supervisors and regulators to cooperate across the G-20 jurisdictions to develop the Standardized Regulatory Stress Scenarios. These scenarios should reflect macro-economic events of particular concern (*e.g.*, default on sovereign debt). Supervisors and regulators may want to explore (i) how certain prudential authorities have constructed the instantaneous shocks currently used in CCAR, and (ii) whether their experience could inform the development of the Standardized Regulatory Stress Scenarios.

    - Supervisors and regulators should refresh the Standardized Regulatory Stress Scenarios on an annual basis, and should test the CCP resources against such scenarios on an annual basis. For the avoidance of doubt, supervisors and regulators should not disclose such scenarios to CCPs until the assessment process begins (thus preventing a CCP from risk managing to the Standardized Regulatory Stress Scenarios).

    - If a CCP has insufficient financial resources to cover clearing member default(s) resulting from the application of the Standardized Regulatory Stress Scenarios, then the authority (or authorities) with primary supervisory or regulatory power over the CCP should have the ability to ensure that the CCP ameliorates the inadequacy. For example, the authority (or authorities) should be able to issue MRIAs ("Matters Requiring Immediate Attention") or conditional approvals.[47]

    - The Guidance should emphasize that it is important for supervisors and regulators to apply the Standardized Regulatory Stress Scenarios in a consistent manner to any CCP that is or is seeking to become a qualified CCP.

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[47] MRIAs would ensure that such CCP immediately correct the sizing of its aggregate pre-funded resources. In addition, depending on the extent of breach, as penalty, the authority (or authorities) may also consider whether such CCP should increase its capital contributions to its default waterfall to fill the breach, thereby creating incentives for a CCP to take a conservative approach towards sizing total financial resources.

ISDA appreciates the opportunity to provide CPMI-IOSCO with more detailed views on CCP stress testing. ISDA would be pleased to work with CPMI-IOSCO further on CCP stress testing and, indeed, on all topics relating to CCP resilience and recovery. Please do not hesitate to contact me or ISDA staff if you have any questions on the Letter.

Sincerely,

Scott O'Malia
Chief Executive Officer
International Swaps and Derivatives Association, Inc.

APPENDIX A: CPMI-IOSCO PUBLIC QUANTITATIVE DISCLOSURE STANDARDS FOR CENTRAL COUNTERPARTIES – STRESS LOSS DISCLOSURES

State whether the CCP is subject to a minimum "Cover 1" or "Cover 2" requirement in relation to total pre-funded default resources. For each clearing service, state the number of business days within which the CCP assumes it will close out the default when calculating credit exposures that would potentially need to be covered by the default fund.	All disclosures to be quarterly
For each clearing service, what is the ***estimated*** largest aggregate stress loss (in excess of initial margin) that would be caused by the default of any ***single*** participant and its affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions?	Peak day amount in previous twelve months, and mean average over previous twelve months.
Report the number of business days, if any, on which the above amount exceeded actual pre-funded default resources (in excess of initial margin) and by how much.	No. of days in quarter, and amount of excess on each day.
For each clearing service, what was the ***actual*** largest aggregate credit exposure (in excess of initial margin) to any ***single*** participant and its affiliates (including transactions cleared for indirect participants)?	Peak day amount in previous twelve months, and mean average over previous twelve months.
For each clearing service, what is the ***estimated*** largest aggregate stress loss (in excess of initial margin) that would be caused by the default of any ***two*** participants and their affiliates (including transactions cleared for indirect participants) in extreme but plausible market conditions?	Peak day amount in previous twelve months, and mean average over previous twelve months.
Report the number of business days, if any, on which the above amount exceeded actual pre-funded default resources (in excess of initial margin) and by how much.	No. of days in quarter, and amount of excess on each day.
For each clearing service, what was the ***actual*** largest aggregate credit exposure (in excess of initial margin) to any ***two*** participants and their affiliates (including transactions cleared for indirect participants)? [see explanatory notes]	Peak day amount in previous twelve months, and mean average over previous twelve months.

4.4 Explanatory Note

Item 4.4: This item is where the results of a CCP's stress-testing of its financial resources are expected to be disclosed. CCPs should specify in their supporting comments to the matrix whether they are subject to a "Cover 1" or "Cover 2" requirement in relation to their total pre-funded default resources, but should report both results so that both Cover 1 and Cover 2 metrics can be compared with actual default resources. These disclosures create no new regulatory obligation for CCPs subject to a Cover 1 requirement to also satisfy a Cover 2 requirement. The disclosures instead aim to support transparency between the CCP and its participants on how safety and efficiency considerations have been balanced in response to different stress scenarios and the decisions that have been made with regard to default fund coverage. Where a CCP is only required to meet a Cover 1 standard, providing disclosure also on its estimated cover 2 requirement may facilitate additional comparisons across CCPs. Nevertheless, because of certain factors, including the size of the market the CCP serves, the CCP's share of that market, and whether a small number of participants account for a disproportionate amount of the CCP's clearing activity, comparison between cover 1 and cover 2 metrics alone will still give an incomplete comparison of relative default fund coverage. Accordingly, CCPs should provide a comparison with default resources – as in item 4.3, market share data – in accordance with part 23 of the matrix, and other clarifying remarks, as appropriate, alongside their disclosure related to Cover 1 and Cover 2 metrics to further help the reader understand the default fund coverage.

In order to aid clearing members' modelling of their exposures to the CCP, the CCP should consider disclosing further information on its default fund stress-testing methodology (eg underlying model parameters and assumptions) insofar as the CCP, in discussion with its participants and regulators, agrees is appropriate without providing confidential information about individual participant positions.