Canadian Securities Administrators

CSA Consultation Paper 91-406

Derivatives: OTC Central Counterparty Clearing

Canadian Securities Administrators Derivatives Committee

June 20, 2012

Table of Contents

CSA Consultation Paper 91-406 – Derivatives: *OTC Central Counterparty Clearing*

On November 2, 2010, the Canadian Securities Administrators ("CSA") Derivatives Committee (the "Committee") published Consultation Paper 91-401 – *Over-the-Counter Derivatives Regulation in Canada* ("Consultation Paper 91-401").[1] Consultation Paper 91-401 set out high-level proposals for the regulation of over-the-counter ("OTC") derivatives. The Committee sought input from the public with respect to the proposals and eighteen comment letters were received from interested parties.[2]

The Committee has continued to contribute to and follow international regulatory proposals and legislative developments, and collaborate with the Bank of Canada, the Office of the Superintendent of Financial Institutions ("OSFI"), the Department of Finance Canada, market participants, as well as bodies such as the International Organization of Securities Commissions ("IOSCO"), the Financial Stability Board ("FSB") and the OTC Derivatives Regulators' Forum ("ODRF"). This public consultation paper, one in a series of eight papers that build on the regulatory proposals contained in Consultation Paper 91-401, proposes a framework for centralized clearing in the Canadian OTC derivatives markets. It is hoped that this paper will generate necessary commentary and debate that will assist members of the CSA in selecting appropriate policies and rules that will eventually be implemented in the various jurisdictions of Canada.

The Committee is working with foreign regulators to develop international standards that will shape the rules that we develop, including those regarding CCP clearing. Although a significant market in Canada, the Canadian OTC derivatives market comprises a relatively small share of the global market, with the majority of transactions involving Canadian market participants being entered into with foreign counterparties. It is therefore crucial that rules be developed for the Canadian market that accord with international practice to ensure that Canadian market participants have full access to international markets and are regulated in accordance with international principles. The Committee will continue to monitor and contribute to the development of international standards and specifically review proposals on industry standards relating to CCP clearing.

[1] See http://www.lautorite.qc.ca/files//pdf/consultations/derives/2010nov02-91-401-doc-consultation-en.pdf.
[2] Comment letters publicly available at http://www.osc.gov.on.ca/en/30430.htm and http://www.lautorite.qc.ca/en/regulation-derivatives-markets-qc.html.

Executive Summary

The adoption of requirements relating to CCP clearing will be a key element in addressing the reform of financial markets in Canada. The introduction of requirements for CCP clearing of previously bilaterally cleared or uncleared derivatives transactions will not only greatly enhance the transparency of markets for regulators, but will also enhance the overall mitigation of risks. We include below a summary of the Committee's recommendations for CCP clearing:

Mandatory clearing requirements

In order to achieve Canada's G-20 commitments, and in accordance with international standards guidance from IOSCO and the FSB, the Committee proposes that CSA members take the necessary steps to make the CCP clearing of eligible OTC derivatives mandatory.

a) The Committee proposes that regulations be adopted requiring CCPs to submit derivatives or categories of derivatives for regulatory review to determine whether the instrument is eligible for CCP clearing and a possible determination that they be subject to a requirement to be centrally cleared by all market participants that are not exempt from the mandatory clearing requirement.

b) The coordinated development of procedures by CSA members will be a necessary first step in determining which OTC derivatives contracts can be centrally cleared and which of these must be centrally cleared, the factors relevant in those determinations and which participants must be required to clear their OTC contracts. In addition, CSA members will develop procedures for the recognition of CCPs and the approval of CCP rules and policies. All will be in accordance with international best practices.

c) Canadian market regulators should adopt a 'bottom-up approach' where OTC derivatives are submitted by a CCP to a market regulator . The market regulator will determine which derivatives will be eligible for CCP clearing and which of those will be subject to mandatory CCP clearing. In conjunction with this approach, the Committee recommends the use of the 'top down approach', a process where CSA members have the power to identify those OTC derivatives that have not been submitted by a CCP in the bottom-up approach but which nonetheless should be subject to mandatory CCP clearing.

d) Co-ordinated CSA regulations should establish the processes to be followed and the criteria that will be used in determining if a derivative should be subject to mandatory CCP clearing. The Committee believes that the evaluation processes should include a public comment period.

e) The Committee believes that a sixty-day public comment period will allow for sufficient time to provide feedback. A communications protocol should be established among CSA members to assist in the harmonization process.

f) A register for those derivatives determined to be subject to mandatory CCP clearing should be established and the information be publicly available.

Back-loading of pre-existing transactions

The Committee proposes that market participants be required to centrally clear new OTC derivative transactions that regulators have determined to be subject to a CCP clearing obligation. Derivatives transactions entered into before the regulations are in effect (pre-existing transactions) and which are not cleared through a CCP could be novated to the CCP at a later date (back-loading). The Committee believes that:

a) the back-loading of pre-existing transactions should be done on a voluntary basis. However, when such transactions are subject to novation or assigned, effectively becoming new trades, they should be subject to any clearing obligation, and that

b) market regulators should conduct a review using information from trade repositories and other sources to determine whether additional back-loading obligations are appropriate to address existing risks. This analysis will be completed once sufficient trade repository data is available.

Clearing timeframes

For voluntarily cleared derivatives, that is, OTC derivative trades *not* executed on an approved trading venue and not subject to mandatory clearing, the Committee recommends their prompt submission to the CCP (no later than the close of business on the day of execution.)

If a derivative which is subject to a clearing obligation is traded on a recognized trading venue, the counterparties must submit the trade as soon as possible.

Intra-group Transactions

The Committee will not be recommending a broad exemption for intra-group transactions based on the risks to the overall market and third parties resulting from such an exemption. The Committee does ask for comments on intra-group transactions.

Recognition of Central Counterparties

Canadian market regulators should recognize and regulate CCPs. This oversight would include the acceptance or rejection of rules and procedures, the application of terms and conditions to such rules, including the CCPs risk management model, as well as the review of regular CCP fillings and financial statements, and the performing of regular and ad hoc inspections.

Governance

CCPs must adopt corporate governance policies to ensure that conflicts of interest are managed and that the board of directors includes independent representation. CCP Boards must establish

committees with appropriate structure and mandates to play key roles in the governance of the CCP.

Fees

Clearing and other fees must be fully transparent to clearing members, customers and regulators as well as to the public.

Participant Access

CCPs should develop robust access requirements to ensure that clearing members do not bring undue risk to the CCP and are able to fulfill their obligations, but which do not impose access restrictions for non-competitive ends. At the same time such rules should not unreasonably prohibit, condition, or limit access to the services offered by the CCP. The access policy should consider a potential clearing member's ability to meet its financial and operational responsibilities arising from its relationship with the CCP.

Open Access to Trading Platforms

Regulation should require the development of policies by CCPs to facilitate open access to trading platforms. Such policies should not unreasonably prohibit or limit access to the CCP regardless of how or where a transaction is executed. CCP access requirements should not result in a competitive advantage to any trading platform.

CCP Rules

The CCP's rule book and procedure framework, including default procedures, must be clear and comprehensive. Both market regulators and participants must have certainty that such rules will be followed during periods of market stress. CCP rules should clearly define and limit the range of circumstances in which it has the ability to invoke emergency powers ensuring that participants understand and manage the risk and cost associated with their participation in the CCP. In particular:

a) CCPs should ensure compliance with published default procedures in all situations and have processes in place to monitor compliance and deal with situations of non-compliance. A mechanism for appeals from CCP decisions should also exist.

b) CCPs must put in place a process for the adoption of rules, including their submission for regulatory, board and, where necessary, member approval.

c) Regulators of both domestic and foreign CCPs should develop and commit to clear co-operative oversight arrangements that deal with the regulation of CCPs subject to multi-jurisdictional regulation. Such protocols should clarify the role of regulators in monitoring and directing the governance model, the rule-making process and the operations of a CCP. They

should also clarify the rights and responsibilities of all relevant regulators and their ability to take steps in addressing issues of a local public interest.

Risk Management

Regulations should be developed requiring that CCPs develop and implement a robust risk management program in accordance with international best practices and the FMI Principles. These programs should be fully transparent to regulators, clearing members and other relevant stakeholders. Specific requirements include that a CCP:

a) Have in place an effective, multi-level contingency structure that includes accurate liquidity analysis and member margining, a default waterfall that sets out clearly the funding events that will occur in the case of a member default and the contributions that will be required of members and the CCP's own capital (if any) and any further financial backstops or insurance that can be accessed;

b) Conducts a full analysis of all relevant risks and has in place appropriate risk management procedures, such as margin and haircut adjustments;

c) Impose risk limits on individual clearing members;

d) Inform its regulator or regulators when a clearing member is at risk of default and when any default procedures are triggered;

e) Undertake periodic testing and reviews of its clearing systems, including models and default procedures, and of clearing member procedures and systems. These tests should involve extreme but plausible market conditions;

f) Maintain and utilize accurate pricing and valuation procedures;

g) Maintain and utilize product approval procedures to ensure that new clearing products do not bring undue risk to the CCP and its members;

h) Have a chief risk officer who is responsible for the implementation of risk management procedures and who reports to the CCP's board of directors or risk management committee, as appropriate;

i) Subject risk management models, including those for valuation and margin calculations, to independent review and validation;

j) Provide regulators with periodic reports relating to the risks applicable to the CCP and a description of how such risks are managed; and

k) Provide regulators with financial reports relating to the CCP, which should include aggregated risk exposures.

Systems and Technology

The Committee believes that regulations for CCPs in Canada should require a program of risk analysis and oversight in order to identify and minimize the sources of operational risk, particularly in regards to systems and technology. The development of appropriate controls to ensure that systems are reliable, secure and have adequate scalability should be required.

Reporting

The Committee recommends that each CSA jurisdiction seek the legislative authority to require the CCP to transmit to regulators the information required for oversight purposes. This will include the frequency and format of the information required.

Foreign-based CCPs and Regulatory Co-operation

As a majority of counterparties to derivatives trades entered into by Canadian participants are resident outside of Canada, it is clear that Canadian market participants will require access to foreign CCPs to clear at least some OTC derivatives transactions. The Committee believes that the review and recognition (or exemption from recognition) of foreign-based CCPs is a priority to ensure that Canada meets its G20 commitments.

Comments and Submissions

The Committee invites input on the issues outlined in this public consultation paper. You may provide written comments in hard copy or electronic form. The committee understands that some market participants were waiting to read the clearing paper before sending comments on end-user exemptions, the committee will welcome all end-user exemption comments with respect to clearing.

The comment period expires September 21, 2012.

The Committee will publish all responses received on the websites of the Autorité des marchés financiers (www.lautorite.qc.ca) and the Ontario Securities Commission (www.osc.gov.on.ca).

Please address your comments to each of the following:

Alberta Securities Commission
Autorité des marchés financiers
British Columbia Securities Commission
Manitoba Securities Commission
New Brunswick Securities Commission
Nova Scotia Securities Commission
Ontario Securities Commission

Please send your comments only to the following addresses. Your comments will be forwarded to the remaining jurisdictions:

John Stevenson, Secretary
Ontario Securities Commission
20 Queen Street West
Suite 1900, Box 55
Toronto, Ontario
M5H 3S8
Fax: 416-593-2318
E-mail: jstevenson@osc.gov.on.ca

Me Anne-Marie Beaudoin, Corporate Secretary
Autorité des marchés financiers
800, square Victoria, 22e étage
C.P. 246, Tour de la Bourse
Montréal, Québec
H4Z 1G3
Fax : 514-864-6381
E-mail: consultation-en-cours@lautorite.qc.ca

Questions

Please refer your questions to any of:

Derek West
Chairman, CSA Derivatives Committee
Director, Derivatives Oversight
Autorité des marchés financiers
514-395-0337, ext 4491
derek.west@lautorite.qc.ca

Michael Brady
Senior Legal Counsel
British Columbia Securities Commission
604-899-6561
mbrady@bcsc.bc.ca

Kevin Fine
Director, Derivatives Branch
Ontario Securities Commission
416-593-8109
kfine@osc.gov.on.ca

Debra MacIntyre
Senior Legal Counsel, Market Regulation
Alberta Securities Commission
403-297-2134
debra.macintyre@asc.ca

Doug Brown
General Counsel and Director
Manitoba Securities Commission
204-945-0605
doug.brown@gov.mb.ca

Abel Lazarus
Securities Analyst
Nova Scotia Securities Commission
902-424-6859
lazaruah@gov.ns.ca

Susan Powell
Senior Legal Counsel
New Brunswick Securities Commission
506-643-7697
susan.powell@nbsc-cvmnb.ca

1. Introduction

In September 2009, the G20 called for the improvement of the global financial markets and its members committed themselves to reforming financial markets and their oversight by the end of 2012 ("G20 Commitments"). As discussed in *Consultation Paper 91-401 on Over-the-Counter Derivatives Regulation in Canada* ("Consultation Paper 91-401"),[3] much international co-operative work has been undertaken through groups such as the Financial Stability Board ("FSB"), the International Organization of Securities Commissions ("IOSCO"), the Committee on Payment and Settlement Systems ("CPSS") and the OTC Derivatives Regulators' Forum ("ODRF").[4]

This paper describes the Committee's proposals relating to CCP clearing of OTC derivatives. The paper starts by describing mandatory CCP clearing and approaches for determining the derivatives to which the mandatory CCP clearing obligation would apply. As well, the paper discusses issues of back loading pre-existing trades, timeframes for CCP clearing and the recognition of counterparties. The paper incorporates and requires compliance with CPSS-IOSCO's *Principles for Financial Market Infrastructures* (the "FMI Principles") particularly in the areas of governance, CCPs' fees, access, risk management and systems and technology. Finally, asset protection, trade reporting, regulatory cooperation over foreign based CCPs and infrastructure are highlighted. The Committee encourages market participants and the public to submit comment letters addressing specific questions as well as any other issue or question raised by this consultation paper.

2. Mandatory CCP Clearing

In 2009, the G20 leaders agreed that all standardized OTC derivatives should be centrally cleared by the end of 2012. In a CCP model, after a trade is executed, either directly between two counterparties or on an exchange or electronic trading platform, the CCP becomes the counterparty to each of the contract participants. Clearing OTC derivatives through a CCP will result in more effective management of counterparty credit risk, thus mitigating the effects if one of the counterparties does not fulfill its obligations. It is the G20's belief, one that is shared by many market regulators, that CCP clearing can contribute to the stability of our financial markets and reduce market risk. Many derivatives have and will continue to evolve from customized contracts traded in a purely OTC, bilateral market to standardized contracts that are centrally cleared and, perhaps, negotiated on an electronic trading platform.[5] Further incentives to centrally clear will also be created for prudentially regulated entities under the new Basel III regulatory capital framework. This process is not straightforward, however, and competing

[3] See http://www.lautorite.qc.ca/files//pdf/consultations/derives/2010nov02-91-401-doc-consultation-en.pdf.
[4] Monitoring and coordinating the implementation of OTCD reforms are being carried out by the FSB, in co-operation with IOSCO and the Committee on Payment and Settlement Systems. See *Implementing OTC Derivatives Market Reforms*, October 2010 ("FSB Implementing Reforms") http://www.financialstabilityboard.org/publications/r_101025.pdf and *Overview of Progress in the Implementation of the G20*
Recommendations for Strengthening Financial Stability, Report of the Financial Stability Board to G20 Leaders, November 2011 http://www.financialstabilityboard.org/publications/r_111104.pdf..
[5] The Committee will be publishing a consultation paper on trading in the months to come.

market interests can affect this progression. Therefore, members of the G20, including the US and the European Union (EU),[6] have required or will require that standardized derivatives be centrally cleared through regulatory requirements.

In response to Consultation Paper 91-401, commenters supported mandatory CCP clearing of OTC derivatives that are eligible for CCP clearing, while expressing concerns with respect to which OTC derivatives contracts should be subject to this requirement.

The Canadian Bankers Association ("CBA") "*endorses the CSA's recommended approach to implement mandatory clearing of OTC derivatives that are determined to be appropriate for clearing and capable of being cleared."*[7] The International Swaps and Derivatives Association ("ISDA") "*strongly agree with the approach to implementing mandatory clearing of derivatives trades that are appropriate for clearing*"[8] but also recommend "*an extended period between a CCP being given permission to clear a product and clearing becoming mandatory on that product."*

TMX Group concurred:

> *We agree with the recommendations to implement a mandatory requirement for centralized clearing of OTC derivatives. The micro (or firm) level benefits of central clearing for OTC derivatives, including capital, collateral and operational efficiencies, and the macro (or systemic) level benefits, including systemic risk management, will greatly improve the resilience of the Canadian financial system and improve the overall efficiency of these markets.*[9]

Several commenters agreed that there are benefits to CCP clearing arrangements; however they felt that the additional burdens[10] of posting margin[11] could deter market participants from using derivatives for risk management purposes, particularly for life insurers, managed funds and commercial end users of derivatives.

The Mouvement Desjardins made the following comment regarding hedge accounting:

---

[6] Australia is proposing to set up legislation to mandate CCP clearing of OTC derivatives, but enact mandates through regulation only if necessary. In the March 2012 report by their council of regulators (*OTC Derivatives Market Reform Considerations),* Australia's council of financial regulators stated that the capital incentives should be sufficient to encourage central clearing, but that they will monitor developments closely to see if mandates are necessary. Other countries such as Argentina have indicated that they do not feel their OTC derivatives markets are significant enough to warrant legislation.

[7] Canadian Bankers Association Comment Letter to the CSA, 2011. ("CBA Comment Letter").

[8] ISDA comment letter to the CSA, January 14, 2011 ("ISDA Comment Letter").

[9] TMX comment letter to the CSA. Toronto, Ontario, 24 January 24, 2011.

[10] In bilateral contracts between a financial institution ("FI") and a non financial institution, the FI may extend credit without collateral arrangements to its client to cover initial margin. The cost associated with obtaining credit will be priced into the derivatives contract, but it may not be transparent to the client that there is a credit arrangement behind their trade. Mandated CCP clearing could result in increased collateral requirements, as the client will now be responsible for meeting initial and variation margin.

[11] Initial margin in a CCP clearing environment is typically posted in the form of cash or highly -liquid securities – a narrower range of collateral than that typically accepted in a bilateral clearing environment. This could be a significant issue for participants such as insurers and long-only asset managers who are accustomed to posting collateral in a broader range of securities.

> [Translation] *In addition, regulators should consider the accounting rules that reserve favourable treatment for customized risk management transactions. Mandatory clearing and standardization of OTC derivatives should not result in increased volatility in users' financial statements.*[12]

Despite the commenters' support of CCP clearing, a variety of valid concerns were expressed. These concerns will be addressed throughout the paper and the Committee will consider them when developing rule and exemption proposals for CSA consideration.[13]

To increase transparency and reduce systemic risk, market regulators and financial market infrastructures will implement requirements that will result in changes to some current practices, changes which may result in increased costs. On the other hand, it is conceivable that savings from netting at a CCP could decrease the margin costs.

2.1 Committee Recommendations

After reviewing comment letters that were submitted in response to Consultation Paper 91-401, the Committee proposes that Canadian market regulators take the necessary steps to make mandatory the CCP clearing of eligible OTC derivatives. The Committee also recommends that the CSA members adopt rules and procedures for:

- the determination of which OTC derivatives contracts are eligible to be centrally cleared and which of these should be subject to mandatory CCP clearing, including a description of the factors relevant to such a determination;
- the determination of which participants should be required to clear their OTC derivatives contracts;
- the recognition of CCPs; and
- the approval of CCP rules, procedures and policies in relation to the clearing of OTC derivatives contracts.

3. Derivatives subject to a Mandatory Clearing Requirement

The Committee believes that the benefits of centralized clearing, including the reduction of counterparty risk and increased regulatory transparency, justify to the extent practical mandatory CCP clearing of the broadest array of OTC derivatives. However, it is evident that some OTC derivatives will continue to be customized, and thus non-standardized, to allow for an effective hedge of a market participant's risks. These derivatives, by their nature, will be so illiquid that to impose a CCP clearing obligation for them would result in either the CCP being subject to unacceptable risk or require the CCP to impose substantial margin requirements, which in turn will cause the transaction to be prohibitively expensive to the counterparties

[12] Le Mouvement des caisses Desjardins comment letter 13 January 2011 ("Desjardins Comment Letter") .
[13] See Section 6 *Exemptions from Central Clearing.*

involved. In either case, inefficiencies in the market will result, as a mandate to centrally clear highly customized derivatives would effectively ban their use. A process must therefore be developed to determine which products should be subject to a mandatory CCP clearing obligation.

The Committee is proposing a combination of two approaches: the bottom-up approach, which refers to a process through which OTC derivatives contracts that a CCP clears or proposes to clear are made subject to a mandatory CCP clearing requirement by a market regulator; and the top-down approach, which is the process by which a market regulator has the power to identify OTC derivatives contracts for which mandatory CCP clearing is desirable, irrespective of whether a CCP clears or proposes to clear such contracts. The bottom-up and top-down approaches are discussed in more detail in sections 3.1 and 3.2 below.

One of the key elements of the bottom-up approach is that a market regulator will receive applications for all OTC derivatives contracts that a recognized CCP clears or proposes to clear and will then assess whether a mandatory clearing obligation is suitable for such contracts.[14] In assessing whether an OTC derivatives contract is subject to a mandatory clearing obligation, a market regulator will consider, among other things, whether:

- the contract is or can be sufficiently standardized to be cleared through a CCP,
- the underlying instruments or markets for the underlying instruments provide adequate pricing information,
- there is sufficient liquidity in the contract, and
- the contract would bring undue risk into a CCP.

In determining whether the implementation of a mandatory clearing requirement is appropriate, market regulators will also weigh the risk to the financial system if the OTC derivatives contract continued to be cleared and settled bilaterally against the risk that it would bring into the CCP if the derivatives contract were to be centrally cleared. For example, there may be a derivatives contract for which a CCP cannot manage the risk and is therefore not suitable for a mandatory clearing obligation. Market regulators should endeavour to achieve a net reduction of risk to the entire financial system.

1. Standardization

In its report, *FSB Implementing Reforms*, the FSB recommended that authorities develop incentives for market participants to use standardized OTC derivatives.

[14] As further noted below, this assessment is distinct from the rule adoption procedures for clearing new derivatives products on a CCP. Should the assessment not determine that the submitted derivative should be subject to mandatory clearing, the CCP will nonetheless be able to continue to offer the derivative for clearing on a voluntary basis, subject to the separate rule-adoption procedures.

> *Standardization is a key condition for central clearing and trading on exchanges or electronic trading platforms, and also helps to facilitate greater market transparency. To promote the G-20's vision for greater use of these safer channels, authorities must ensure that appropriate incentives for market participants to use standardized products are in place. In particular, authorities should counter incentives that market participants may have to use nonstandardized products solely to avoid central clearing and trading requirements.*[15]

The Committee believes that several factors should be taken into consideration when determining the level of standardization of an OTC derivative contract. It is proposed that a product which uses standardized, widely-accepted and widely-used legal documentation, including standardized features and contractual terms should be reviewed to determine if it should be subject to mandatory clearing.

Consideration should also be given to the level of standardization of an OTC derivative contract's transaction process, i.e., whether the product supports straight-through processing, which is defined as the automation of the entire process from trade initiation to settlement (and often referred to as STP). STP reduces risk from the otherwise manually-intensive nature of post-trade processing and the potential for significant market disruptions in closing out positions following a member default.[16]

Other factors for consideration include:

- whether the contract is traded on an electronic trading platform, and
- whether conventions and standard industry practices are in place to address a contract's lifecycle events.

2. Adequate pricing information

Transparency of transaction prices is required to support the risk management framework of the CCP. Historical pricing information, including pricing in all market conditions, is needed for determination of initial margin calculations. Current pricing information is important to allow the CCP to understand the changing risks related to a derivatives position as a result of market factors. Such information is also a necessary element of establishing variation margin requirements. Furthermore, a CCP should develop alternative pricing methods for instances where there is a disruption in standard pricing channels. Ultimately, the CCP should have access to sufficient data, the ability and the capacity to independently price such instruments.

---

[15] FSB Implementing Reforms , page 3.

[16] For a discussion of Canadian STP initiatives, see *CSA Discussion Paper 24-401 on Straight-through Processing and Request for Comments*, Supplement to the Bulletin concerning securities of the Autorité des marchés financiers, 2004-06-11 vol. 1, No. 19, June 11, 2004 (Discussion Paper 24-401); and *CSA Notice 24-301—Responses to Comments Received on Discussion Paper 24-401 on Straight-through Processing, Draft Regulation 24-101 respecting Post-trade Matching and Settlement, and Draft Policy Statement to Regulation 24-101 respecting Post-trade Matching and Settlement*, Supplement to the Bulletin concerning securities of the Autorité des marchés financiers, 2005-06-11 vol. 2, No. 6, February 11, 2005 .

3. Liquidity

To be centrally cleared, a derivative contract must have sufficient liquidity to allow the CCP to manage its risks in the case of a participant's default. Where a default occurs, sufficient liquidity would give the CCP flexibility to port the participant's positions to another participant, to offset its exposure to the non-defaulting counterparty by entering into a contract with a new offsetting counterparty, or to liquidate the positions.

In response to Consultation Paper 91-401, ISDA commented that the sufficient liquidity criterion should be applied conservatively and recommended certain parameters for determining liquidity in a product:

> *[W]e consider that the "sufficient liquidity" requirement ought to be applied very conservatively. We repeat the importance of this, as a CCP must calculate net margin each day and price availability is required to do this. In addition, since this requirement applies for the whole life of the trade price availability must be guaranteed in all market conditions, including stressed markets.*
>
> *Further study is necessary to determine if there is sufficient liquidity with respect to each derivative asset class. Certain parameters for liquidity for each product are a minimum number of market makers, frequency of trading (daily) and depth of market (daily trading must be in sizes that are not insignificant). Some products may meet these requirements, or not, depending on tenor.*[17]

4. Undue risk to the CCP

The CCP must have the expertise and operational capacity to manage efficiently all the risks associated with the products that it clears. The CCP must have the necessary ability, technology and resources to manage the volume and size of contracts related to each product that will be cleared. The CCP must be able to determine if a derivative would bring undue risk to the CCP and should therefore not be cleared.

In response to Consultation Paper 91-401, one of the issues raised was the approach market regulators should adopt when considering which OTC derivatives would be appropriate for clearing. Several responses cited criteria that are broadly similar to those outlined above and in the *Dodd-Frank Wall Street Reform and Consumer Protection Act* ("Dodd-Frank Act");[18] however some commenters raised additional factors to be considered. In its comment letter, the CBA supported the approach presented in Consultation Paper 91-401 but recommended a regulatory regime that is harmonized with international jurisdictions and one which includes consideration of the following additional factors:

[17] ISDA Comment Letter.
[18] Dodd-Frank Act, Section 723 (h)(2)(D).

> *Given that a large portion of derivatives activity by Canadian financial institutions (except equity linked) occurs with foreign counterparties, coupled with the need to harmonize the Canadian derivatives regulatory regime with international jurisdictions, the evaluation criteria used to identify OTC derivatives eligible for clearing should be broadly consistent with criteria applied, or proposed to be applied, under similar international legislation, including: (i) the reduction of systemic risk; (ii) the liquidity of contracts; (iii) the availability of pricing/valuation information; (iv) the ability of at least one central counterparty clearing house (a "CCP") to handle the volume of contracts; (v) the level of client protection provided by the CCP; and (vi) the clearing costs.*[19]

The Mouvement Desjardins also recommended that the determination of trades that should be subject to mandatory CCP clearing include a review of additional factors:

> [Translation] *Desjardins agrees with the recommended option […] Regulators should consider the following:*
>
> • *market volume of the derivative;*
>
> • *number of market participants for the derivative;*
>
> • *size of market participants for the derivative;*
>
> • *available liquidity of market participants for the derivative;*
>
> • *factors affecting the derivative, such as daily margin calculation method, payment dates and maturity;*
>
> • *complexity of the derivative.*[20]

3.1 Bottom-Up Approach

The Committee believes that market regulators should consider using a bottom-up approach where a CCP submits OTC products (or group, category, type or class of OTC products) that it already clears or proposes to clear to its market regulator(s) who would determine whether the products in question are eligible for central clearing and should be subject to mandatory clearing. This bottom-up approach would provide market regulators with information regarding contract design, the markets for the derivative and its underlying, price determination and risk makeup of the product, including any systemic risk it may pose.

In order to facilitate a market regulator's ability to assess effectively whether a product is eligible for central clearing and should be subject to a mandatory clearing obligation, it should

[19] CBA Comment Letter.
[20] Desjardins Comment Letter.

clearly set out the information that it expects to receive from a CCP under the bottom-up approach. A CCP's submission would include, among other things, a description of the primary attributes of the product; the type of trading that takes place in the product (such as on an electronic trading platform); details of the CCP's risk management framework; and the timeframe in which the CCP can begin clearing the product.

Further, when market regulators receive a CCP's submission, they should follow transparent and specific procedures for determining whether a mandatory clearing obligation should apply, which generally would include: gathering information about the product and the markets in which the product is traded and any restrictions to which the CCP may be subject; and consultation with stakeholders, including other regulatory authorities, to inform the assessment of the product, as appropriate.

The bottom-up determination process is distinct from the existing rule approval processes that exist currently for clearing agencies.[21] The U.S. Securities and Exchange Commission ("SEC") clarifies the different filing requirements:

> *A clearing agency that plans to accept a security-based swap for clearing must file a Security-Based Swap Submission with the Commission for a determination by the Commission of whether a security-based swap, or a group, category, type or class of security-based swaps, is required to be cleared. As discussed in Section I, in cases where accepting a security-based swap (or group, category, type or class of security-based swaps) for clearing constitutes a change in a ''stated policy, practice, or interpretation'' of the clearing agency, the clearing agency also would be required to file a proposed rule change. In such cases, the Commission must determine (i) whether to approve the clearing agency's proposed rule change to clear the applicable security-based swap and (ii) whether the security-based swap would be subject to the mandatory clearing requirement.*[22]

In response to Consultation Paper 91-401, several commenters, including the Working Group of Commercial Energy Firms, suggested that the bottom-up approach is the most appropriate:

> *The Working Group supports the Committee's recommendation that a central clearing requirement apply only to standardized derivatives contracts. A definition of a "standardized contract" likely always will be elusive. The best solution is for central counterparties . . . to identify potential contracts that might fall under the central clearing requirements and, upon application by the CCP, for regulators to determine whether such contract is appropriate for central clearing. Regulators*

[21] In Ontario, clearing agencies must submit rule changes to the OSC; in Quebec, clearinghouses can certify that rule modifications respect the *Derivatives Act* but such self-certification is subject to review at any time by the AMF.
[22] Federal Register / Vol. 76, No. 143 / Tuesday, July 26, 2011 / Page 44464 et seq.
http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-18663a.pdf.

> *should provide notice and invite public comments as to whether a contract is appropriate for central clearing.*[23]

The U.S. Commodity Futures Trading Commission ("CFTC") has finalized rules under the Dodd-Frank Act that set out criteria for the CFTC to determine which derivatives submitted to the CFTC by CCPs will be subject to mandatory clearing.

The CFTC will make its determination based on information submitted by the CCP, including assurances that the designated clearing organization ("DCO") is eligible to accept a derivative; information regarding the existence of significant outstanding notional exposures, trading liquidity, and adequate pricing data; the existence of a rule framework and expertise at the DCO; information on the effect on the mitigation of systemic risk in clearing the derivative; the existence of legal certainty in the event of the insolvency of the relevant DCO or one or more of its clearing members; product specifications and participant eligibility standards; pricing sources, models and procedures; risk management procedures; rules and procedures; and any other information required by the Commission.[24]

The SEC has proposed guidance to CCPs in demonstrating compliance with the criteria set out in its proposed rules under the Dodd-Frank Act. The guidance includes information that should be provided by a CCP proposing to clear a swap or category of swaps:

> *In describing the security-based swap, or any group, category, type or class of security-based swaps, that a clearing agency plans to accept for clearing, the clearing agency could include the relevant product specifications, including copies of any standardized legal documentation, generally accepted contract terms . . . standard practices for managing and communicating any life cycle events associated with the security-based swap and related adjustments, and the manner in which the information contained in the confirmation of the security-based swap trade is transmitted. The clearing agency also could discuss its financial and operational capacity to provide clearing services to all customers subject to the clearing requirements as applicable to the particular security-based swap. Finally, the clearing agency could include an analysis of the effect of a clearing requirement on the market for the group, category, type, or class of security-based swaps, both domestically and globally, including the potential effect on market liquidity, trading activity, use of security-based swaps by direct and indirect market participants and any potential market disruption or benefits. This analysis could include whether the members of the clearing agency are operationally and financially capable of absorbing clearing business (including indirect access market*

[23] *Working Group of Commercial Energy Firms* comment letter to the CSA, January 14, 2011. http://www.osc.gov.on.ca/documents/en/Securities-Category9-Comments/com_20110114_91-401_mcindoed_menezesm_sweeneyr.pdf , p. 4.

[24] Federal Register / Vol. 76, No. 143 / Tuesday, July 26, 2011 / Page 44464 et seq. http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-18663a.pdf.

> *participants) that may result from a determination that the … swap is required to be cleared.*[25]

The European Securities and Markets Authority (ESMA) has also developed an approach for assessing the eligibility of OTC derivatives for clearing.[26] At this time ESMA is developing technical standards that will affect all OTC derivatives entered into by two financial parties, a financial counterparty and a non-financial counterparty and between two non-financial counterparties.[27]

Factors to be considered in determining whether a derivative should be subject to a mandatory clearing obligation include the market, the derivative, the CCP and the counterparties. This analysis will need to take into consideration characteristics that are specific to the Canadian market, such as the size and depth of liquidity or the homogeneity of market participants (where market participants' portfolios have very similar risk profiles). The bottom-up approach can be complemented by the top-down approach, described below.

3.2 Top-Down Approach

Under the top-down approach, market regulators conduct analysis of market data, particularly the information received from trade repositories, for the purpose of identifying derivatives or categories of derivatives that potentially should be subject to an obligation to be centrally cleared. Canadian market regulators would also review the decisions by foreign regulators to mandate the clearing of particular derivatives or categories of derivatives.

If the review of this data leads Canadian market regulators to believe that an instrument is suitable for CCP clearing, we will conduct market analysis, including holding discussions with relevant CCPs, and then make a determination whether the derivative or category of derivatives is clearable and thus must be cleared on a recognized CCP, or that it does not meet the eligibility standard and will not be subject to mandatory clearing. The determination will take into account the factors mentioned above: standardization of the derivative, liquidity of the market, the availability of accurate pricing, the risk the derivative would bring to a CCP, and the costs to the market participants.

The CFTC has set out its draft process for reviewing derivatives that have not been accepted for clearing in new § 39:

> *(1) The Commission, on an ongoing basis, will review swaps that have not been accepted for clearing by a derivatives clearing organization to make a determination as to whether the swaps should be required to be cleared. In*

[25] Federal Register / Vol. 75, No. 250 / Thursday, December 30, 2010 / Proposed Rules p. 82490 et seq. http://www.gpo.gov/fdsys/pkg/FR-2010-12-30/pdf/2010-32085.pdf, p.82495.

[26] It has been proposed that once a CCP receives approval to clear a derivative, it would notify ESMA which would then have six months to determine if the relevant class of derivatives should be subject to a clearing obligation. ESMA must assess: reduction of systemic risk in the financial system; liquidity of contracts; availability of pricing information; ability of the CCP to handle the volume; and level of client protection provided by the CCP. There would be a public consultation.

[27] Council of the European Union, June 6, 2011 *Proposals for a Regulation of the European Parlia*ment and of the Council on OTC derivative transactions, central counterparties and trade repositories ("COE June 6, 2011"), p. 31.

> *undertaking such reviews, the Commission will use information obtained pursuant to Commission regulations from swap data repositories, swap dealers, and major swap participants, and any other available information. . . .*
>
> *If no derivatives clearing organization has accepted for clearing a particular swap, group, category, type, or class of swaps that the Commission finds would otherwise be subject to a clearing requirement, the Commission will:*
>
> *(i) Investigate the relevant facts and circumstances;*
>
> *(ii) Within 30 days of the completion of its investigation, issue a public report containing the results of the investigation; and*
>
> *(iii) Take such actions as the Commission determines to be necessary and in the public interest, which may include requiring the retaining of adequate margin or capital by parties to the swap, group, category, type, or class of swaps.*[28]

A CCP is in the best position to determine if a particular derivative, if cleared, would pose undue risk to the CCP or its members. The FSB notes

> *"Authorities should determine which products should be subject to a mandatory clearing obligation; however, they should not require a particular CCP to clear any product that it cannot risk-manage effectively, and should not mandate CCP clearing in circumstances that are not consistent with the G-20 objectives."*[29]

Market regulators may determine that a derivative is sufficiently standardized and meets the regulatory requirements for CCP clearing; however the determination to clear the derivative or not should be made by the CCP, based on its risk analysis (and not for anti-competitive reasons).

The top-down approach will ensure that market regulators develop and maintain an understanding of the derivatives being traded, the development of the market and the ongoing application of the G20 objectives. In addition it will provide market regulators an opportunity to initiate discussions related to clearing certain categories of derivatives where clearing would provide risk management or other benefits.

The Committee further recognizes that factors used to determine if a derivative can be cleared, such as market depth and liquidity, availability of efficient and accurate prices, and risk an OTC derivative contract brings to a CCP are always evolving and will change over time. Regulators will from time to time analyze these factors and use the top-down approach to determine if an OTC derivative contract is still suitable for mandatory clearing by a CCP. If the result of the analysis shows significant deterioration to the factors, rendering a derivative no longer suitable for CCP

[28] Federal Register / Vol. 76, No. 143 / Tuesday, July 26, 2011 / Page 44464 et seq.
http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-18663a.pdf p.44474
[29] FSB Implementing Reforms, p. 4.

clearing, market regulators will publish the findings and request public comment before making a decision on whether to remove the mandatory clearing obligation for such a derivative.

3.3 Committee Recommendations

The Committee proposes that market regulators adopt rules for determining whether a derivative is eligible for CCP clearing which are based on international best practices, including those being developed by the US CFTC and ESMA. The Committee believes that a coordinated approach to determining which derivatives will be subject to mandatory clearing, using both bottom-up and top-down approaches, will provide clarity to the market, and will ensure consistent risk analysis.

Further, the Committee proposes that market regulators maintain a register of those derivatives which have been determined to be eligible for central clearing and subject to mandatory CCP clearing. This registry should be publicly available on Committee members' web sites.

The Committee proposes that market regulators adopt regulations that require CCPs to submit all derivatives or categories of derivatives for regulatory review and a possible determination that the derivative or category of derivatives must be cleared by all market participants who are not exempt from the mandatory clearing requirement. The Committee proposes that regulations should set out the processes which will be followed and the criteria that will be evaluated to make such determinations. The Committee also believes that the evaluation process should include a public comment period.

The Committee believes that a sixty day public comment period, consistent with that proposed by U.S. regulators, is sufficient time for interested participants to provide input. The Committee proposes that this comment period would be part of a prescribed regulatory review period to ensure that decisions made in relation to clearing are made within a reasonable timeframe. It is recommended that a communication protocol be established among CSA members to harmonize the review process.

For each approach, the Committee proposes to develop a clear process for publishing determinations which would include a sixty day public comment period and consultations with the CCPs that would clear the instrument. Should a CCP not accept a derivative for clearing that has been determined to be subject to mandatory clearing, the market regulator will conduct further analysis and publish a report of its findings. This analysis may lead to the determination of minimum capital or margin requirements for the derivative where bilaterally cleared, or other trading restrictions.

The Committee further proposes that the top-down approach be also used to determine if a derivative that is already subjected to mandatory clearing by a CCP continues to be suitable to be centrally cleared. Should such analysis support the removal of a derivative from mandatory clearing obligations, the regulators will publish the findings for public comment period before making the final evaluation and decision.

Further, work will need to continue on the development of international standards for the determination of which derivatives should be subject to mandatory CCP clearing. It is worth noting that due to confidentiality laws in some jurisdictions it may be difficult or impossible to obtain information regarding a derivative or its underlying market, further complicating this process.

4. Back-loading of pre-existing transactions

Derivatives that are uncleared or cleared bilaterally and that pre-exist the enactment of a clearing obligation may benefit from the CCP clearing process. However, there is considerable complexity involved in requiring such transactions to be centrally cleared or "backloaded" into a CCP, including the renegotiation of contract provisions and the unwinding of collateral arrangements.

The EU has proposed that derivatives entered into after the coming into effect of a clearing mandate, or those derivatives that are entered into or novated after the adoption of regulations but before the coming into effect of a clearing mandate, be mandated to be cleared through a recognized CCP if their maturity is beyond a specified date to be determined by ESMA.

The Committee understands that a requirement to clear pre-existing trades would result in substantial costs for market participants without, in some situations, material benefit. This is particularly true in cases where the OTC derivative contract will be concluded in the near future. The Committee believes that the costs of back-loading must be weighed against the benefits to determine what is best for our markets.

4.1 Committee Recommendations

The Committee proposes that participants be required to clear new OTC derivative transactions that have been determined to be subject to a CCP clearing obligation. The backloading of pre-existing trades should be done on a voluntary basis. However, when pre-existing trades in derivatives that are subject to a clearing obligation are novated or assigned (effectively becoming new trades) they will be subject to the clearing obligation. As sufficient data become available in trade repositories and from other sources, the Committee proposes that market regulators review the data to determine whether additional back-loading obligations are appropriate.

4.2 Request for Comment

Question 1. Do you consider that product characteristics of any OTC derivative asset classes make them eligible for CCP clearing based on the factors set out herein? If so, what asset classes would you exclude, and for what reasons?

Question 2. For which asset classes do you consider CCP clearing is inappropriate or not currently feasible based on the factors described herein, and for what reasons?

Question 3. What are the costs and risks involved in moving particular derivatives or classes of derivatives transactions to CCP clearing that regulators should consider in determining if a derivative should be subject to a CCP clearing requirement?

5. Clearing Timeframes

The prompt reporting of derivatives transactions to a CCP by counterparties to the transaction and the prompt review and acceptance or rejection of the transaction for clearing by the CCP are key elements in managing risk. This will reduce the chance that market risk results in undue losses if a significant change in value or other market event occurs before clearing.

The CFTC proposes:

> *As previously proposed, §39.12(b)(7)(ii) required DCOs to accept immediately upon execution all transactions executed on a [Designated Contract Market] or [Swap Execution Facility]. A number of DCOs and other commenters expressed concern that this requirement could expose DCOs to unwarranted risk because DCOs need to be able to screen trades for compliance with applicable clearinghouse rules related to product and credit filters. The Commission recognizes that while immediate acceptance for clearing upon execution currently occurs in some futures markets, it might not be feasible for all cleared markets at this time. For example, where the same cleared product is traded on multiple execution venues, a DCO needs to be able to aggregate the risk of trades coming in to ensure that a clearing member or customer has not exceeded its credit limits. Accordingly, the Commission is proposing to modify § 39.12(b)(7)(ii) to permit DCOs to screen trades against applicable product and credit criteria before accepting or rejecting them. Consistent with principles of open access, the proposal would require that such criteria be non-discriminatory with respect to trading venues and clearing participants. The Commission continues to believe that acceptance or rejection for clearing in close to real time is crucial both for effective risk management and for the efficient operation of trading venues. Rather than prescribe a specific length of time, the Commission is proposing as a standard that action be taken ''as quickly as would be technologically practicable if fully automated systems were used.'' The Commission anticipates that this standard would require action in a matter of milliseconds or seconds or, at most, a few minutes, not hours or days.*[30]

5.1 Committee Recommendations

The Committee believes that Canadian counterparties should be required to submit their trades that are subject to a clearing obligation to a recognized CCP as soon as possible, in any case no later than the close of business on the day of execution. The Committee also believes that CCPs

[30] Federal Register / Vol. 76, No. 147 / Monday, August 1, 2011 / Proposed Rules, pp. 45732-3
http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-19365a.pdf p.45732-3

should be required to review each submitted transaction to ensure that it complies with CCP rules and does not represent an inappropriate risk to the CCP as quickly as possible. Communication of the CCP's acceptance or rejection of the transaction for clearing should be provided immediately after the CCP's review has been completed, and before the end of the CCP's business day.

For derivatives that are cleared voluntarily – that is, for OTC derivatives trades not executed on an approved trading venue and not subject to the mandatory clearing, the Committee recommends that if such transactions are submitted to a CCP promptly, which would be no later than the close of business on the day of execution, the CCP would be subject to the same requirement to accept or reject the transaction by the end of the CCP's business day.

If a derivative that is subject to a clearing obligation is traded on a recognized trading venue, the counterparties (or the trading venue acting on behalf of the counterparties) must submit the trade as soon as possible. This process would preferably be fully automated, with integration between the trading venues and the CCPs' systems.

5.2 Request for Comment

Question 4. Does a deferred submission, be it measured in minutes, hours or days, engender significant counterparty or other risks that would make the imposition of a strict timeframe for submission to a CCP, and the acceptance by the CCP necessary?

6. Exemptions from CCP clearing

Although most derivatives transactions will be mandated to be cleared on a CCP, some transactions involving categories of participants will be exempt from the requirement.

6.1 End-users

The Committee proposes an exemption for certain end-users in CSA Consultation Paper 91-405 - *Derivatives: End-user Exemption*,[31] published on April 13, 2012. This consultation outlined the proposed exemption and invited comments on a number of issues relating to such an exemption.

6.2 Intra-group transactions

The EU has proposed to exempt intra-group transactions from their clearing obligation.[32] Intra-group transactions are defined in the proposal,[33] and are essentially transactions between two related, affiliated or associated entities which, in the case of financial institutions, are included

[31] See http://www.lautorite.qc.ca/files/pdf/consultations/derives/2012avril13-91-405-cons-en.pdf.
[32] COE June 6, 2011, Art. 3(a).
[33] Ibid, Art 2(a).

in the same consolidated financial statements on a fully consolidated basis and the counterparties are subject to the same risk evaluation, measurement and control procedures.[34]

Commenters in the U.S. have argued in favour of an exemption for such transactions. They explain that intra-group transactions as a class of swaps generally serve to consolidate risk into a single book or portfolio. Mandating the clearing of such transactions, they assert, would only serve to multiply the number of cleared transactions without resulting in any reduction in CCP risks. In a comment letter to the SEC and the CFTC, JP Morgan asserted that because of the risk mutualization feature inherent in CCPs the introduction of additional and in effect unnecessary swap transactions to the clearinghouse would result in increased systemic risk not the contrary.[35] Moreover, ISDA has argued that the resulting increased margin requirements would result in an unnecessary consumption of group liquidity.[36] Thus, if the counterparties are controlled by the same entity and the positions essentially net each other out, from an accounting perspective there may be no additional implicit risk in such transactions.

6.3 Request for Comment

The Committee believes that an exemption from a requirement to clear intra-group transactions should be considered in the context of two situations: (i) where the transaction occurs between two related entities that have access to the same capital within one of the entities or a parent; and (ii) where the transaction occurs between two related entities that are separately capitalized such that the transaction will result in a change in the risk exposure that either entity has to third-parties.

The Committee is concerned that a broad exemption from the CCP clearing obligation for intra-group transactions will result in a situation where some intra-group transactions could result in increased risk to the market or to a third-party and, as a result does not propose to provide a broad exemption for intra-group transactions.

Question 5. The Committee asks whether an exemption from mandatory CCP clearing for intra-group transactions is appropriate, including a description of the risks that they could pose to the marketplace and the costs of migrating such transactions to a CCP.

7. Recognition of Central Counterparties

Due to the importance of CCPs in the fulfillment of Canada's G20 commitments, the Committee recommends that CCPs be recognized in order to operate within Canada.[37] Recognition by a Canadian market regulator will be mandatory where a CCP carries on business or otherwise

[34] The EU also addresses the requirements for exempting counterparties who are part of the same "Institutional Protection Schemes" in Ibid, Section 2a.
[35] See comment letter to CFTC and SEC from J.P. Morgan, June 3, 2011.
[36] See comment letter to CFTC from ISDA, December 22, 2010, p.9.
[37] Currently, only Alberta, Quebec and Ontario require the recognition, or exemption from recognition, of CCPs (in Quebec, a "clearing house", in Ontario and Alberta, a "clearing agency"). Other jurisdictions have proposed or will propose legislative amendments to require recognition of a CCP.

offers clearing services to a person carrying on business or resident in that regulator's jurisdiction. This is not limited to the CCP's physical presence; a CCP located in one Canadian province or in a foreign country can carry on business in other jurisdictions of Canada where it offers services to persons residing in a jurisdiction or registered to carry on business in that jurisdiction. Some market regulators may provide exemptions from recognition, with conditions and subject to a determination that the CCP is adequately regulated by its home regulator and other factors.

In order to be recognized, a CCP would be required to demonstrate that it complies with the FMI Principles[38] and specified criteria related to governance, fees, access, rules, due process, risk management, systems and technology, financial viability and reporting, operational reliability, protection of assets, outsourcing, information sharing and regulatory co-operation.[39]

7.1 Committee Recommendations

The Committee proposes that market regulators provide for the recognition and regulation of CCPs. The Committee proposes that market regulators should have the ability to apply terms and conditions to the recognition or exemption from recognition of a CCP, approve or reject the CCP's rules and procedures, apply terms and conditions to such rules, including its risk management model, receive and review regular CCP filings including the CCP's financial statements, and conduct regular and ad hoc inspections.

8. CPSS – IOSCO

In 2001, the Committee on Payment and Settlement Systems (CPSS) published *Core Principles for Systemically Important Payment Systems.*[40] In November 2004, CPSS and the IOSCO Technical Committee jointly published *Recommendations for Central Counterparties* (the "RCCP").[41] These papers became the global standards for CCP structure and oversight. In January 2010, a review of these standards was commenced, resulting in the publication for comment in March 2011 of a consultative report and the publication of the final FMI Principles in April 2012.

The FMI Principles describe the risks faced by financial market infrastructures ("FMIs") including CCPs. The FMI Principles are intended as broad but flexible guidance for addressing risks and efficiency. Some principles provide minimum requirements, others are proposed as best practices, while some "reference an important, common theme."[42]

[38] See section 8 *CPSS-IOSCO.*
[39] See Ontario Securities Commission Staff Notice 24-702 Regulatory Approach To Recognition and Exemption From Recognition of Clearing Agencies p. (2010) 33 OSCB 2325 http://www.osc.gov.on.ca/documents/en/Securities-Category2/sn_20100319_24-702_clearing-agencies.pdf.
[40] See http://www.bis.org/publ/cpss43.pdf.
[41] See http://www.bis.org/publ/cpss61.pdf.
[42] FMI Principles, p. 12.

Compared to the current standards, the FMI principles introduce a number of provisions on issues that were not addressed by the previous standards. For example, new principles have been introduced on segregation and portability, tiered participation and general business risk.

The Committee proposes to incorporate the FMI Principles when developing requirements applicable to CCPs recognized in Canada. Further analysis may be required where particularities of the Canadian market, such as transaction volumes, depth of liquidity or limited counterparties, may necessitate a more conservative or restrictive approach.

8.1 Governance

A CCP must ensure that its governance structure addresses any conflicts of interest, access standards, risk management, ownership concentration, management compensation, board representation and transparency while also providing reasonable representation of the public interest and the interests of key stakeholders. The FMI Principles state that:

> *An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.*[43]

CFTC draft rules require specific governance constructs, limit ownership to no more than 20% of a Designated Clearing Organization ("DCO") by an "enumerated entity"[44] (see Dodd-Frank Act s. 726(a)), require 35% independent representation on the board of directors (and no fewer than two independent members), and require that remuneration of board members not be linked to the performance of the CCP. The board is required, annually, to review its performance. As well, the Board should be able to remove a board member if his or her actions could be prejudicial to the board. Where CFTC rules require sufficient expertise in financial services, risk management and clearing services, EU proposed rules[45] also require that a board member be "of sufficiently good repute and experience".

In Canada, *Regulation 52-110 respecting Audit Committees* ("Regulation 52-110") defines independence of directors to mean absence of any direct or indirect material relationship between a director and the issuer. A "material relationship" is a relationship which could, in the view of the issuer's board of directors, be reasonably expected to interfere with the exercise of a member's independent judgement. However, certain individuals are considered to have a material relationship with an issuer, such as an individual who is, or has been within the last three years, an employee or executive officer of the issuer.[46]

---

[43] *Ibid*. p. 26.
[44] The "enumerated entities" include: (i) bank holding companies with over $50,000,000,000 in total consolidated assets; (ii) a nonbank financial company supervised by the Board of Governors of the Federal Reserve System; (iii) an affiliate of (i) or (ii); (iv) a swap dealer; (v) a major swap participant; or (vi) an associated person of (iv) or (v).
[45] COE June 6, 2011, Art. 25.
[46] See http://www.msc.gov.mb.ca/legal_docs/legislation/notices/4_52_110_prop.pdf.

The Committee also believes that there may be situations where a CCP's directors must be independent from parties that have a material ownership interest in the CCP, particularly where the owners are industry participants.

8.2 Committee Recommendations

The Committee believes that CCPs must adopt corporate governance policies to ensure that an appropriate proportion of board members reflects its diverse stakeholders, including clearing members and persons clearing trades indirectly through clearing members. These independent board members should be:

- independent of the management of the CCP;
- independent of persons that have material ownership of the CCP, particularly in situations where owners of the CCP include financial institutions or other market intermediaries; and
- independent of the clearing members of the CCP.

To ensure independence from CCP management, the Committee believes that flexible language, similar to the meaning of independence in Regulation 52-110, *mutatis mutandis,* should be included in regulations that set out the test for independence of directors of a CCP. This would be consistent with the FMI Principles which state that the "*board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).*"[47] The Committee agrees that non-executive members are necessary for the governance of a CCP.

The Committee believes that the board of a recognized CCP should consider, in its decision-making, the interests of other relevant stakeholders from different jurisdictions that it serves. This may be achieved by appropriate representation of Canadian users of the CCP on the board of directors or by having processes that require due consideration of unique circumstances/interests of users from different jurisdictions. An appropriate number or percentage of directors should represent Canadian market participants where possible.

8.3 Request for Comment

Question 6. Is it appropriate to ensure that Canadian market participants have meaningful input into operational decisions of a CCP operating in Canada?

Question 7. Do the Committee's proposals relating to corporate governance of a CCP address potential issues relating to conflicts of interest that may arise in the operation of a CCP? If not, what other measures would address such conflicts of interest?

[47] FMI Principles. p. 26.

8.4 Board Committees

Committees are a fundamental component of a CCP's governance structure. Through committees, clearing members and other relevant stakeholders of a CCP can influence the CCP's functions such as decisions that affect the risks taken on and managed by the CCP, margins, membership access, and executive remuneration. Committees also serve to mitigate any conflicts of interest, allowing for heterogeneous representation.

8.5 Committee Recommendation

The Committee proposes that regulations require that CCPs provide details regarding the structure and mandate of board committees as part of the recognition process. Committees could include: finance and audit; risk management; compensation or human resources, or other committees where appropriate, such as in relation to governance, product approval, information systems and strategic planning.

In addition to the committee structure and the oversight of the board of directors, a CCP will need to develop and implement procedures regarding the mitigation of conflicts of interest, fair and equitable access to the CCP, the confidentiality of information to which employees and directors have access, as well as the disclosure to regulators and to the public of information regarding governance, including decisions taken that have denied access to the CCP or rejected the clearing of a derivative.

8.6 Advisory Committees

Advisory committees provide an opportunity for persons or entities that are not members of a CCP's board of directors to have meaningful input into the operations of a CCP. An advisory committee will allow key stakeholders to represent additional interests and provide specialized expertise, particularly in relation to operational issues that may have a substantial impact on members and other users of a CCP.

8.7 Committee Recommendations

The Committee proposes that CCPs operating in Canada should establish advisory committees to allow Canadian direct and indirect participants of a CCP and other stakeholders to provide input into operational decisions, as appropriate. Such committees should have a transparent mandate which outlines the rights and obligations of the committee and thus provide Canadian users with a way of providing meaningful input into operational decisions made by a CCP that could materially impact those users.

The Committee believes that such advisory committees should have members representing a broad range of interests including CCP members, end-users and other relevant stakeholders, as appropriate.

8.8 Fees

The FMI Principles propose that fees be disclosed publicly, both by a CCP and its clearing members. It requires the disclosure of prices and fees of each service and function provided

separately. The FMI Principles state that an "FMI should publicly disclose its fees at the level of individual services it offers, as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes." [48]

The CFTC has proposed that CCPs shall be "required to make available to market participants information concerning . . . each clearing and other fee charged to members." [49]

EU proposed regulations would also require that:

> *A CCP and its clearing members shall publicly disclose the prices and fees associated with the services provided. They shall disclose the prices and fees of each service and function provided separately, including discounts and rebates and the conditions to benefit from those reductions. A CCP shall allow its clearing members and, where relevant, their clients, separate access to the specific services provided. A CCP shall account separately for costs and revenues of the services provided and shall disclose that information to the competent authority.*[50]

The disclosure of all fees (including direct costs that will be incurred by users of a CCP) ensures that fair and equitable access is afforded to all participants, and CCP users understand the business model of the CCP.

8.9 Committee Recommendations

The Committee recommends that a CCP's fees must be disclosed to clearing members, their customers and regulators as well as to the public, as described in the FMI Principles.

8.10 Participant Access

Without limiting the ability and responsibility of a CCP to develop robust access requirements to ensure that a clearing member does not bring undue risk to the CCP and is able to fulfill its obligations both to the CCP and its customers, a CCP must not impose access restrictions for non-competitive ends. In this respect the CFTC's Core Principle C:

> *. . . mandates that participation requirements must ''permit fair and open access.'' It also mandates that clearing members must have ''sufficient financial resources and operational capacity to meet obligations arising from participation in the derivatives clearing organization.''*
>
> *. . . Proposed § 39.12 is designed to ensure that participation requirements do not unreasonably restrict any entity from becoming a clearing member while, at the same time, limiting risk to the DCO and its clearing members. The Commission*

[48] FMI Principles p. 121.
[49] Federal Register/Vol.75, No. 240/ Wednesday, Dec. 15, 2010/Proposed Rules p. 78192. http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2010-31131a.pdf

[50] COE June 6, 2011, Art. 36.

> *believes that more widespread participation could reduce the concentration of clearing member portfolios and diversify risk. It could also increase competition by allowing more entities to become clearing members. . . . Proposed § 39.12(a)(1)(iii) would prohibit participation requirements that have the effect of excluding or limiting clearing membership of certain types of market participants unless the DCO can demonstrate that the restriction is necessary to address credit risk or deficiencies in the participants' operational capabilities that would prevent them from fulfilling their obligations as clearing members.*[51]

The CFTC has set out other concerns regarding impediments to indirect access to the CCP in commentary to the proposed rulemaking, noting:

> *Some clearinghouses have indicated that they intend to require that, for a transaction to be eligible for clearing, one of the executing parties must be a clearing member. This has the effect of preventing trades between two parties who are not clearing members from being cleared. Such a restriction of open access serves no apparent risk management purpose and operates to keep certain trades out of the clearing process and to constrain liquidity for cleared trades.*[52]

The SEC has proposed rule 17Ad-22(b)(5), which would prohibit membership restrictions based on dealer status.[53]

> *As a way to promote greater access to clearing, the SEC is proposing to prohibit denial of CCP membership based on whether a person offers OTC derivative dealer services. Through this rule the SEC is attempting to ensure access to client clearing (correspondent clearing) firms who are non-dealers and could be discriminated against through a CCP's access criteria. For example, a client clearing firm not offering dealer services might not have the certain operational capabilities and could have significantly less financial resources given the nature of their operations.*[54]

As well, the SEC proposes to prohibit access limitations based on minimum volume or transaction thresholds:

> *The proposed rule would prohibit the establishment of minimum portfolio sizes or transaction volumes that by themselves would act as barriers to participation by*

---

[51] Federal Register / Vol. 76, No. 216 / Tuesday, November 8, 2011 http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-27536a.pdf.

[52] Section§ 39 (b)(4) " would prohibit a DCO from requiring one of the original executing parties to be a clearing member in order for a contract, agreement, or transaction to be eligible for clearing." This provision was adopted on November 8, 2011. Federal Register / Vol. 76, No. 216 / Tuesday, November 8, 2011, p. 69360. http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-27536a.pdf.

[53] This proposal is not universally supported. Concerns have been expressed regarding non-dealers' ability to fully participate in a default auction, for example.

[54] Federal Register / Vol. 76, No. 51 / Wednesday, March 16, 2011 / Proposed Rules http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-20337a.pdf.

> *new participants in clearing. This speaks to the relevant size of market participants and whether or not the membership criteria should reflect the amount of risk they bring to the CCP instead of establishing large arbitrary values such as minimum volume and transaction thresholds.*[55]

The SEC further proposes that access should not be denied based on minimum net capital requirements of $50 million or more:

> *The SEC proposed rule limits the ability for CCPs clearing OTC derivatives to deny membership access to participants with 50 million or more in net capital. Under the proposed rule, a CCP wishing to raise the net capital above 50 million minimum would have to demonstrate to the commission through a rule filing or in its application, that any other measures would be unable to effectively mitigate the risks to the CCP.*[56]

The FMI Principles acknowledge the importance of risk-based and equitable access requirements:

> *An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.*[57]

These proposals underscore the concerns regulators have regarding CCP access and governance, and the Committee shares such concerns. The Committee feels, however, that prescriptive rules that limit a CCP's ability to determine access rules and thresholds that are appropriate within its risk management policy can serve to increase rather than reduce systemic risk.

Market regulator approval of CCP access policies and ongoing monitoring of compliance therewith can reduce the risk that a CCP is unduly limiting access.

8.11 Committee Recommendation

The Committee proposes that regulations include an obligation for a CCP to develop and comply with published access rules that are objective, risk-based and justified in terms of the safety and efficiency of the CCP and the market it serves. The access policy should consider a potential clearing member's ability to meet its financial and operational responsibilities arising from its participation in the central counterparty but should not unduly discriminate against certain classes of participants or introduce competitive distortions. These policies will be subject to regulatory approval during the recognition or approval process of a CCP and ongoing review by market regulators.

In addition, CCPs will be required to maintain records of all applications for access including records relating to each grant of access and denial of access.

---

[55] *Ibid.*
[56] *Ibid.*
[57] FMI Principles, p. 101.

8.12 Open Access to Trading Platforms

A vertical silo structure, where a trading venue feeds directly into the CCP, may force market participants who wish to transact and clear a particular derivative to use the captive trading venue. Open access to the CCP from multiple trading venues could remove this potential monopoly.

In this regard, the EU proposes the following:

> *A CCP that has been authorized to clear [OTC] derivative contracts shall accept clearing such contracts on a non-discriminatory and transparent basis, regardless of the venue of execution. Without prejudice to Article 32a, a CCP may require that those venues of execution comply with the operational and technical requirements established by the CCP. . . . A venue of execution shall provide trade feeds on a non-discriminatory and transparent basis to any CCP that has been authorised to clear [OTC] derivative contracts traded on the venue of execution upon request by the CCP.*[58]

Some commenters in Europe have suggested that the ability of a CCP to require compliance with their technical requirements "could allow exchanges to monopolise trading of derivatives by restricting access to the clearing houses they operate."[59]

The CFTC states:

> *Proposed §39.12(b)(7)(i) would establish general standards for the adoption of rules that establish a time frame for clearing. The DCO would have to coordinate with each [Swap Execution Facility] and [Designated Contract Market] that lists for trading a product that is cleared by the DCO, in developing rules and procedures to facilitate prompt and efficient processing of all contracts, agreements, and transactions submitted to the DCO for clearing. For prompt and efficient clearing to occur, the rules, procedures, and operational systems of the trading platform and the clearinghouse must mesh. Vertically integrated trading and clearing systems currently process high volumes of transactions quickly and efficiently. The Commission believes that trading platforms and DCOs under separate control should be able to coordinate with one another to achieve similar results. The Commission also recognizes that there may be issues of connectivity between and among trading platforms and clearinghouses.*[60]

As the markets evolve to comply with clearing and trading obligations, models may develop that differ considerably from the traditional vertical silo. For the present, the development of trading venues and their relationships with CCPs remains speculative.

---

[58] COE June 6, 2011 , Art. 8.
[59] Price, Michelle. "Fresh clash looms over new OTC rules." *Financial News*, November 29, 2010.
[60] Federal Register / Vol. 76, No. 47 / Thursday, March 10, 2011 / Proposed Rules 13105 http://www.cftc.gov/LawRegulation/FederalRegister/FinalRules/2011-27536.

8.13 Committee Recommendations

The Committee proposes that regulations be adopted that require CCPs develop access policies that facilitate fair and open access and which do not unreasonably prohibit or limit access to its services regardless of how the derivatives transaction is executed. The access requirements established by a CCP or services offered by a CCP should not create a competitive advantage for any trading facility.

8.14 Request for Comment

Question 8. The Committee seeks public comment on the relevance of developing rules allowing for access to CCPs regardless of trading venue. Is this of concern in the Canadian marketplace at this time or in the future?

8.15 CCP Rules

As a regulated entity, a CCP's rules,[61] operating procedures and by-laws (collectively, rules) should be subject to regulatory review and approval. It is through its rules that a CCP builds its clearing framework. Rules govern how the CCP staff and management perform their duties, how the CCP's governance structure operates and how clearing members and their customers fulfil their obligations.

The Dodd-Frank Act states:

> *A designated financial market utility shall provide 60 days advance notice to its Supervisory Agency of any proposed change to its rules, procedures, or operations that could, as defined in rules of each Supervisory Agency, materially affect, the nature or level of risks presented by the designated financial market utility.* [62]

The FMI Principles explain:

> *An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants and relevant rules and key procedures should be publicly disclosed. An FMI's rules and procedures are typically the foundation of the FMI and provide the basis for participants' understanding of the risks they incur by participating in the FMI. As such, these rules and procedures should include clear descriptions of the system's design and operations, as well as the rights, obligations, and risks participants incur by participating in the FMI. They should clearly outline the respective roles of participants and the FMI, as well as the procedures that will be followed in routine and non-routine circumstances. In particular, an FMI should have clear and comprehensive rules and procedures for addressing financial and operational problems within the system. An FMI should publicly disclose all relevant rules and key procedures, including key aspects of its participant-default rules and procedures (principle 13), so that all market*

[61] This may consist of participant obligations and rights.
[62] *See Dodd-Frank*, § 806(e)(1).

> *participants and relevant authorities can quickly assess potential risks in periods of market stress.*[63]

CCPs should have comprehensive and transparent policies outlining their operations that relate to clearing and risk management. It is expected that these policies would identify risks related to the operation of the CCP and describe how the CCP proposes to manage such risks both during the ordinary course of business and in stress situations.

It is important that, in the event of a crisis, trades or positions cleared by the CCP not revert to bilateral exposures without prior consent of market regulators and non-defaulting participants. The use of emergency powers should be restrictive and should not allow the CCP to void or refuse to perform previously cleared contracts on the grounds that market events or industry protocols have made the managing of associated risk exposures difficult for the CCP. A CCP's policies and procedures should clearly specify the scope of such emergency powers and under what circumstances they would be exercised.[64]

CCP rules should also cover the obligations of its clearing members to maintain sufficient capital, specify margin requirements and how margin is to be managed operationally and ensure that clearing members' operational capacity and capability is sufficient to meet customer and CCP needs. The CFTC requires in rule §39.12(a)(3) that:

> *a DCO establish participation requirements that ensure that clearing members have adequate operational capacity to meet obligations arising from participation in the DCO. The requirements would have to include, at a minimum, the ability to process expected volumes and values of transactions cleared by the clearing member within required time frames, including at peak times and on peak days; the ability to fulfill collateral, payment, and delivery obligations imposed by the DCO; and the ability to participate in default management activities under the rules of the DCO . . . .*[65]

A CCP's rules provide a legal, predictable framework for the operations of the CCP, the obligations of its members and the adjudication of disputes, the orderly treatment of a default and, in the extreme, the orderly winding-down of its operations. For the rules to have merit, they must be enforced by the CCP, which should have the authority to sanction or otherwise discipline its members and maintain resources to monitor and apply the rules.

8.16 Committee Recommendations

The rules and procedures of a CCP, including its default procedures, must be clear and comprehensive. Market regulators, clearing members and other market participants must have certainty that such rules will be followed during a period of market stress. Accordingly, a CCP's

[63] FMI Principles, page 122.
[64] Forthcoming CPSS-IOSCO work will focus specifically on the resolution of FMIs.
[65] Federal Register Vol. 76, No. 13/Thursday, January 20, 2011/Proposed Rules, p. 3701 et seq. http://www.cftc.gov/LawRegulation/FederalRegister/ProposedRules/2011-690.

rules should clearly define and limit the range of circumstances in which the CCP has the ability to invoke emergency powers so that participants understand and manage the risk associated with their participation in the CCP as well as their contingent liabilities. CCPs should ensure compliance with published default procedures in all situations except as directed by regulators in accordance with protocols accepted by all regulators of the CCP.

Although it should be each clearing member's responsibility to ensure that it complies with the rules of a CCP, the Committee believes the CCP should have processes in place to monitor compliance and deal with situations where a member does not or cannot comply. These processes should include a mechanism for appeal from the decisions of the CCP, where appropriate.

The Committee further recommends that a CCP must put in place a process for the adoption of rule modifications. This process must be in accordance with the legislation under which it operates, including any requirements for obtaining regulatory approval from all applicable regulators, as well as appropriate board and clearing member approvals.

9. Risk management

Risk management is at the core of the CCP's operations. Every aspect of its business must take into account risk management and risk mitigation. The FMI Principles set out the major sources of risk to a CCP: systemic risk, legal risk, credit and counterparty risk, liquidity risk, and general business and operational risk. A CCP should establish and ensure compliance with decision-making processes for its board of directors, committees and management. A CCP should recognize that its actions could have adverse economic circumstances for participants and for the broader markets and that conflicts of interest among CCP owners, operators, participants and the broader market may arise, and must be considered, when making such decisions. In general, the CCP should be following the policies and procedures described in their published documents; however CCPs may be required to depart from standard procedures, in extraordinary circumstances. In all such circumstances, the CCP must seek and comply with the directions of the CCP's regulators. The default rules and procedures of a CCP should be clear as to when the CCP can exercise its discretion to declare a clearing member in default.

In applying for recognition or exemption of a CCP, the Committee expects that a CCP will provide a detailed analysis of risks relating to its operations and a description of how they are mitigated. For example, CCPs must address the risk of default by one or more of its key clearing members and undertake appropriate stress testing of the adequacy of its total financial resources. The FMI Principles suggest that stress tests should involve the analysis of the impact of a concurrent default of a CCP's two largest participants and their affiliates if the CCP is

involved in activities with a more-complex risk profile or is systemically important in multiple jurisdictions.[66]

In addition, a CCP operating in Canada should be required to implement accurate, ongoing risk analysis in relation to the CCP's obligations. The CCP should impose margining obligations on its members to appropriately manage all types of risks to the CCP with the objective of avoiding recourse to default funds. Should a defaulting participant's margin not meet the obligations of the CCP for closing out that participant's default positions, the CCP's fully-transparent default process should clearly identify the resources that will be made available to satisfy the defaulting participant's obligations and the order in which these resources will be used – the default waterfall.

9.1 Default Management

As each level of resources is exhausted in the case of a default of a member or members, the next level in the waterfall is tapped until the obligations have been fulfilled and positions are balanced. Rules pertaining to the differing sources of assets in the default waterfall which clearly outline who will have to contribute to the waterfall (in what order and under what circumstances) and include details of any auction process, at what point a default fund and other backstops will be accessed and what will occur should all resources be exhausted will provide certainty to clearing members as to their obligations and clarity to market regulators.

In Rule 39.11(b)(1), the CFTC enumerates a list of the types of financial resources that would be available to a Designated Clearing Organization ("DCO") to satisfy financial requirements: "*(1) The margin of the defaulting clearing member; (2) The DCO's own capital; (3) the guaranty fund deposits of the defaulting clearing member and non-defaulting clearing members; (4) default insurance; (5) if permitted by the DCO's rules, potential assessments for additional guaranty fund contributions on non-defaulting clearing members; and (6) any other financial resource deemed acceptable by the Commission."*[67]

The CFTC will require that a "*derivatives clearing organization shall maintain cash, U.S. Treasury obligations, or high quality, liquid, general obligations of a sovereign nation, in an amount greater than or equal to an amount calculated as follows: (A) Calculate the average daily settlement pay for each clearing member over the last fiscal quarter; (B) Calculate the sum of those average daily settlement pays; and (C) Using that sum, calculate the average of its clearing*

[66] FMI Principles; Principle 4 " *An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions*."

[67] Federal Register / Vol. 76, No. 216 / Tuesday, November 8, 2011, p. 69346 www.cftc.gov/LawRegulation/FederalRegister/FinalRules/2011-27536.

members' average pays."[68] The CFTC indicated that it may revisit this issue after it is determined what international standard will be adopted.

9.2 Framework for Comprehensive Management of Risks

The EU proposals require that:

> *A CCP shall have procedures in place to be followed where a clearing member does not comply with the participation requirements of the CCP within the time limit and according to the procedures established by the CCP. The CCP shall outline the procedures to be followed in the event the default of a clearing member is not declared by the CCP.*
>
> *A CCP shall take prompt action to contain losses and liquidity pressures resulting from defaults and shall ensure that the closing out of any clearing member's positions does not disrupt its operations or expose the non-defaulting clearing members to losses that they cannot anticipate or control. The CCP shall promptly inform the competent authority where it considers that the clearing member will not be able to meet its future obligations and before it declares its default.*[69]

Ensuring novel derivatives do not bring undue risk to the CCP should be a fundamental part of a CCP's risk management. The CFTC in its proposed rule §39.12(b)(1)

> *would require a DCO to establish appropriate requirements for determining the eligibility of agreements, contracts, or transactions submitted to the DCO for clearing, taking into account the DCO's ability to manage the risks associated with such agreements, contracts, or transactions. Factors to be considered in determining product eligibility would include, but would not be limited to: (i) trading volume; (ii) liquidity; (iii) availability of reliable prices; (iv) ability of market participants to use portfolio compression with respect to a particular swap product; (v) ability of the DCO and clearing members to gain access to the relevant market for purposes of creating and liquidating positions; (vi) ability of the DCO to measure risk for purposes of setting margin requirements; and (vii) operational capacity of the DCO and clearing members to address any unique risk characteristics of a product.*[70]

The CFTC has also proposed that a DCO have both a Chief Risk Officer ("CRO") and a Chief Compliance Officer ("CCO"), and that these be two different individuals. The CRO would report to the risk committee or board of directors and would be responsible for the implementation of the risk management framework and for making appropriate recommendations regarding the CCP's risk management functions.

---

[68] Ibid, p. 69351.
[69] COE June 6, 2011, Art. 45.
[70] Federal Register / Vol. 76, No. 13 / Thursday, January 20, 2011, p. 3702 http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-690a.pdf.

The CFTC further proposes that:

> *. . . a DCO [would] impose risk limits on each clearing member, by customer origin and house origin, in order to prevent a clearing member from carrying positions where the risk exposure of those positions exceeds a threshold set by the DCO relative to the clearing member's financial resources, the DCO's financial resources, or both. The DCO would have reasonable discretion in determining: (A) the method of computing risk exposure; (B) the applicable threshold(s); and (C) the applicable financial resources, provided however, that the ratio of exposure to capital would have to remain the same across all capital levels. The Commission could review any of these determinations and require different methods, thresholds, or financial resources, as appropriate.*[71]

The EU proposes that CCPs undertake regular reviews and perform stress testing:

> *A CCP shall regularly review the models and parameters adopted to calculate its margin requirements, default fund contributions, collateral requirements and other risk control mechanisms. It shall subject the models to rigorous and frequent stress tests to assess their resilience in extreme but plausible market conditions and shall perform back tests to assess the reliability of the methodology adopted.*
>
> *… A CCP shall regularly test the key aspects of its default procedures and take all the reasonable steps to ensure that all clearing members understand them and have appropriate arrangements in place to respond to a default event. A CCP shall publicly disclose key information on its risk management model and assumptions adopted to perform the stress tests referred to in paragraph 1.*
>
> *Powers are delegated to the Commission to adopt regulatory technical standards specifying the following:*
>
> *(a) the type of tests to be undertaken for different classes of financial instruments and portfolios;*
>
> *(b) the involvement of clearing members or other parties in the tests;*
>
> *(c) the frequency of tests;*
>
> *(d) the time horizons of tests;*
>
> *(e) the key information referred to in paragraph 3.*[72]

FMI Principle 3 requires that an FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

[71] Federal Register/ Vol. 76, No. 13/ Thursday, January 20, 2011, p. 3707 http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-690a.pdf.
[72] COE June 6, 2011, Art.46.

The CFTC's proposed regulation §39.13(a) would require a CCP to ensure that it possesses the ability to manage the risks associated with discharging its responsibilities through the use of appropriate tools and procedures.

The CFTC proposed rules would require a DCO to establish and maintain written policies, procedures, and controls, approved by its board of directors, which establish an appropriate risk management framework that, at a minimum, clearly identifies and documents the range of risks to which the DCO is exposed, addresses the monitoring and management of the entirety of those risks, and provides a mechanism for internal audit. Those risks may include, but are not limited to, legal risk, credit risk, liquidity risk, custody and investment risk, concentration risk, default risk, operational risk, market risk, and business risk. The entity would be required to regularly review its risk management framework and update it as necessary.

Other tools enumerated by the CFTC in its proposed rulemaking include: measurement and monitoring of current and potential credit exposures to clearing members; models for determining initial margin that are risk-based and regularly reviewed; independent review and validation of the CCP's systems for generating initial margin requirements, including the CCP's theoretical models; regular review of spread margins that permit a CCP to allow reductions in initial margin requirements for related positions; having a reliable source of timely price data to support both initial margin and variation margin calculations, and having written procedures and sound valuation models for addressing circumstances where pricing data is not readily available or reliable because there is no continuous liquid market or if bid-ask spreads are volatile; and daily review and periodic back testing to enable a CCP to ensure that its margin models continue to provide adequate coverage of the CCP's risk exposures to its clearing members.[73]

9.3 Committee Recommendation

The Committee proposes that regulations be developed to require that a CCP develop and implement a robust risk management program, in accordance with international best practices such as the FMI Principles. The Committee proposes that the regulations set out specific requirements, including that:

1. a CCP have in place an effective, multi-level contingency structure that includes accurate risk analysis and member margining, a default waterfall that sets out clearly the funding events that will occur in the case of a member default and the contributions that will be required of members and the CCP's own capital (if any) and any further financial backstops or insurance that can be accessed;
2. a CCP conduct a full analysis of all relevant risks and has in place appropriate risk management procedures, such as margin and haircut adjustments and provide the result of such analysis to its market regulator(s);
3. a CCP impose transparent risk limits on individual clearing members;

[73] See Federal Register / Vol. 76, No. 13 / Thursday, January 20, 2011 / Proposed Rules, p. 3698 et seq. http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-690a.pdf.

4. a CCP inform its regulator or regulators when a clearing member is at risk of default and when any default procedures are triggered;
5. a CCP undertake regular stress testing of the adequacy of the CCP's financial resources, including risk and pricing models and default procedures, and of clearing member procedures and systems, and provide the results of such tests to its market regulator(s). These stress tests should involve extreme but plausible as well as hypothetical stress situations;
6. a CCP maintain and utilize accurate pricing and valuation procedures;
7. a CCP maintain and utilize product approval procedures to ensure that new clearing products do not bring undue risk to the CCP and its members;
8. a CCP have a chief risk officer who is responsible for the implementation of risk management procedures and who reports to the CCP's board of directors or risk committee, as appropriate;
9. a CCP's models, including those for valuation and margin calculations, be subject to independent review and validation;
10. all CCPs provide the applicable Canadian regulators with periodic and ad hoc reports relating to the risks applicable to the CCP and a description of how such risks are managed; and
11. regular financial reports relating to the CCP, which should include aggregated risk exposures, are provided to the market regulator of the CCP.

10. Systems and Technology

A stable, robust and scalable technological infrastructure is a prerequisite for any CCP seeking recognition or exemption of recognition in Canada. The proposed FMI Principles provide that:

> *A critical service provider should have a robust information security framework that appropriately manages its information security risks. The framework should include sound policies and procedures to protect information from unauthorized disclosure, ensure data integrity, and guarantee the availability of its services. In addition, a critical service provider should have policies and procedures for monitoring its compliance with its information security framework. This framework should also include capacity planning policies and change-management practices.*[74]

The CFTC proposes that a CCP implement a risk analysis and oversight program with respect to its operations and automated systems. Adequate maintenance of resources that would allow the CCP to fulfill its obligations in this respect is also required. Risk analysis would be required in six categories: information security, business continuity and disaster recovery, capacity and performance planning, systems operations, systems development and quality assurance, and physical security and environmental controls. This last category would include the maintenance

[74] FMI Principles, p. 170-71.

of buildings and generators as well as technological infrastructure and personnel resources sufficient to enable timely recovery and resumption of operations in the event of disruption.[75]

The FMI Principles require a CCP to:

> *identify all plausible sources of operational risk, both internal and external, and mitigate their impact through the deployment of appropriate systems, policies, procedures and controls. Systems should be designed to ensure a high degree of security and operational reliability, and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.*[76]

The EU similarly proposes that:

> *A CCP shall maintain information technology systems adequate to deal with the complexity, variety and type of services and activities performed so as to ensure high standards of security and the integrity and confidentiality of the information maintained.*[77]

10.1 Committee Recommendations

The Committee believes that regulations for CCPs in Canada should require a program of risk analysis and oversight in order to identify and minimize sources of operational risk, particularly systems and technology. This would be achieved through the development of appropriate controls and procedures to ensure that technological systems are reliable, secure, and have adequate scalability.

The Committee acknowledges that *Regulation 21-101 respecting Marketplace Operation* ("Regulation 21-101") addresses systems requirements for marketplaces, and recommends that comparable regulations be developed for CCPs. In particular, the Committee proposes that a CCP be required to "develop and maintain reasonable business continuity and disaster recovery plans; an adequate system of internal control over those systems; and adequate information technology general controls, including without limitation, controls relating to information systems operations, information security, change management, problem management, network support and system software support."[78]

The Committee also proposes that CCPs be required to test their system requirements regularly in accordance with regulation standards that will be substantially similar to those in Regulation 21-101 which requires testing "in accordance with prudent business practice, on a reasonably frequent basis and, in any event, at least annually, make reasonable current and future capacity

[75] See Federal register/Vol. 76, No. 13/Thursday, January 20, 2011/ Proposed Rules, 39.18(b)(c)(e),)p. 3713 http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-690a.pdf.
[76] FMI Principles, p. 94.
[77] COE June 6, 2011, Art.24 (6).
[78] Regulation 21-101, §12.1(a) http://www.osc.gov.on.ca/en/SecuritiesLaw_rule_20101210_21-101_unofficial-consolidated.htm.

estimates; conduct capacity stress tests to determine the ability of those systems to process transactions in an accurate, timely and efficient manner; and test its business continuity and disaster recovery plans."[79] Further, any failure would have to be immediately reported to the market regulator.

Finally the Committee proposes that the CCP be required to publish system specifications which will allow its users, including clearing members and their clients, to develop their technology systems to allow them to efficiently access the CCP's systems. In addition, the CCP will allow all such users with reasonable access to a test environment provided by the CCP which will allow the users to undertake testing of their systems.

11. Protection of Assets

The clearing of OTC derivative transactions will cause certain market participants who are not clearing members at CCP to indirectly clear their OTC derivatives transactions through intermediaries. Effective segregation and portability mechanisms at CCPs will help to ensure that indirect clearing is done in a manner that protects customer positions and collateral and potentially improves a CCP's resilience to a clearing member default. This issue is specifically discussed in Consultation Paper 91-404 – *Derivatives: Segregation and Portability in OTC Derivatives Clearing*[80] which was published on February 10, 2012.

12. Reporting

Although information related to derivatives transactions will be collected in a trade repository or trade repositories, CCPs will improve market transparency by allowing the central collection of information on general market characteristics and activity with respect to transactions cleared by CCP, and aggregate information on the types of participants and concentration of participants' exposures within CCPs.

The information disclosed to regulators will help them to evaluate risks, including risks particular to a CCP and broader systemic risks. The FMI Principles state that:

> *Authorities should have appropriate powers or other authority consistent with their relevant responsibilities to obtain timely information necessary for effective regulation, supervision, and oversight. In particular, authorities should use these powers to access information that enables them to understand and assess (a) an FMI's various functions, activities, and overall financial condition; (b) the risks borne or created by an FMI and, where appropriate, the participants; (c) an FMI's impact on its participants and the broader economy; and (d) an FMI's adherence to relevant regulations and policies. Key sources of information include official system documents and records, regular or ad-hoc reporting, internal reports from*

[79] Ibid, §12.1(b).
[80] http://www.lautorite.qc.ca/files//pdf/consultations/derives/2012fev10-91-404-cons-en.pdf.

> *board meetings and internal auditors, on-site visits and inspections, information on operations outsourced to third parties, and dialogue with an FMI's board, management, or participants. Authorities should have appropriate legal safeguards to protect all confidential and non-public information obtained from an FMI. Authorities, however, should be able to share relevant confidential or non-public information with other authorities, as appropriate, to minimise gaps and reduce duplication in regulation, supervision, and oversight.*[81]

CCPs should also divulge detailed information for market participants to evaluate the risks, costs and benefits associated with their participation in CCPs. As such, complete information on margin-setting methodologies, risk management arrangements and fee structure should be disclosed to actual and prospective users of a CCP.

The CFTC proposes details regarding reports that must be made regularly, because of a determined event or on request:

> *Proposed §39.19 would require certain reports to be made by the DCO to the Commission: (1) On a periodic basis (daily, quarterly or annually), (2) where the reporting requirement is triggered by the occurrence of a significant event; and (3) upon request by the Commission. Unless otherwise specified by the Commission or its designee, each DCO would have to submit the information required by this section to the Commission electronically and in a form and manner prescribed by the Commission.*
>
> *Currently, the Commission receives initial margin data from several, but not all DCOs and not necessarily on a daily basis. . . . The Commission is therefore proposing regulations that would require reporting by all DCOs on a daily basis. By requiring both sets of data as well as intraday initial margin calls to be reported directly to the Commission, the Commission would be better positioned to conduct risk surveillance activities efficiently, to monitor the financial health of the DCO, and to detect any unusual activity in a timely manner.*
>
> *Proposed §39.19(c)(1)(i) would require a DCO to report both the initial margin requirement for each clearing member, by customer origin and house origin, and the initial margin on deposit for each clearing member, by origin. Proposed §39.19(c)(1)(ii) would require a DCO to report the daily variation margin collected and paid by the DCO. The report would separately list the mark-to-market amount collected from or paid to each clearing member, by origin.*[82]

The SEC has proposed rule 17Ad-22(c)(1) which would require a CCP to calculate and maintain a record of the financial resources necessary to withstand, at a minimum, a

[81] FMI Principles, p.128.
[82] Federal Register / Volume 75, Number 240 / December 15, 2010 http://www.cftc.gov/LawRegulation/FederalRegister/ProposedRules/2010-31130.

default by the participant to which it has the largest exposure in extreme, but plausible, market conditions, and sufficient documentation to explain the methodology it uses to compute such financial resource requirement.[83]

As well, the SEC addresses public dissemination of information to aid market participants in their risk evaluations:

> *The proposed rule would require dissemination of pricing and valuation information by CCPs . . . to the public on terms that are fair, reasonable, and not unreasonably discriminatory,[including] all end of day settlement prices and any other prices for OTC derivatives that the CCP may establish to calculate its participants' mark-to-market margin requirements.*

12.1 Committee Recommendations

The Committee recommends that each CSA jurisdiction seek the legislative authority to require the transmission to its market regulator by a CCP of the information required for oversight purposes. This information will be set out in regulations that will also specify the frequency and format of the information. Such information may include, but not be limited to, transaction level details, margin requirements, guarantee fund contributions, financial statements, risk models, financial resources that must be available for a market stress situation, board decisions and reports, rule and procedural modifications, information regarding outsourcing arrangements, including any agreements and oversight programs, and details of any emergency or disciplinary actions.

12.2 Request for Comment

Question 9. The Committee asks for comment on the type of information that a CCP should provide and that should be made publicly available.

13. Foreign-based CCPs and Regulatory Cooperation

As stated earlier, the Committee proposes that each CSA jurisdiction enact legislation that will require all CCPs that perform CCP clearing of OTC derivatives in its jurisdiction to be recognized as a clearing agency, or exempted from recognition. This obligation is already in force in Quebec,[84] Ontario[85] and Alberta.[86] This obligation would apply not only to local CCPs, but CCPs from outside a CSA jurisdiction that wish to exercise clearing activity with an entity from a CSA jurisdiction.

In this respect, the FMI Principles state that:

---

[83] See Federal Register / Vol. 76, No. 51 / Wednesday, March 16, 2011 / Proposed Rules, p. 14476 http://www.gpo.gov/fdsys/pkg/FR-2011-03-16/pdf/2011-5182.pdf.

[84] *Derivatives Act* (Québec), R.S.Q., c. I-14.01, s. 12 http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=2&file=/I_14_01/I14_01_A.html.

[85] *Securities Act* (Ontario), R.S.O. 1990, c. S.5, s. 21.2 (0.1) http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90s05_e.htm.

[86] *Securities Act* (Alberta), RSA 2000, C S-4, s. 67(1) http://www.qp.alberta.ca/documents/Acts/s04.pdf.

> *Central banks, market regulators, and other relevant authorities should cooperate with each other, domestically and internationally (that is, on a cross border basis), in order to support each other in fulfilling their respective regulatory, supervisory, or oversight mandates with respect to FMIs. Relevant authorities should explore, and where appropriate, develop cooperative arrangements that take into consideration (a) their statutory responsibilities, (b) the systemic importance of the FMI to their respective jurisdictions, (c) the FMI's comprehensive risk profile (including consideration of risks that may arise from interdependent entities), and (d) the FMI's participants. The objective of such arrangements is to facilitate comprehensive regulation, supervision, and oversight and provide a mechanism whereby the responsibilities of multiple authorities can be fulfilled efficiently and effectively. Authorities are encouraged to cooperate with each other to reduce the probability of gaps in regulation, supervision, and oversight that could arise if they did not coordinate and to minimise the potential duplication of effort and the burden on the FMIs or the cooperating authorities. Relevant authorities should also cooperate with resolution authorities and the supervisors of direct participants, as appropriate and necessary, to enable each to fulfil its respective responsibilities*[87].

The importance of cooperative arrangements is underscored in IOSCO's *Principles Regarding Cross-Border Supervision*:

> *While regulators often respond by mandating that a regulated entity's overseas operations must comply with domestic standards and oversight requirements prior to being permitted to engage in domestic business, confirmation and enforcement of these requirements can prove challenging. Even where securities regulators have in place enforcement cooperation mechanisms such as the IOSCO Multilateral Memorandum of Understanding Concerning Consultation and Cooperation and the Exchange of Information (IOSCO MMOU), the day-to-day information outside of an enforcement context that a regulator needs in order to exercise effective oversight may be difficult to access without the assistance and cooperation of the relevant counterpart. While regulators have different supervisory approaches, each has a common interest in information-sharing and cooperation based on earned trust in each other's regulatory and supervisory systems.*[88]

The EU proposes that:

> *A CCP established in a third country can be used by clearing members established within the Union for the purpose of clearing OTC derivatives including for the*

[87] FMI Principles, p.134.
[88] http://www.iosco.org/library/pubdocs/pdf/IOSCOPD322.pdf.

> *purpose of the clearing obligation … provided that the CCP is recognised by ESMA in accordance with the procedure laid down in the following paragraphs.*
>
> *(ESMA or the local regulator) may recognise a CCP established in a third country that has applied for recognition to provide certain clearing services or activities only where the following conditions are met:*
>
> *(a) the Commission has adopted a Decision in accordance with paragraph 3;*
>
> *(b) the CCP is authorised in, and is subject to, effective supervision ensuring a full compliance with the prudential requirements applicable in that third country;*
>
> *(c) co-operation arrangements have been established pursuant to paragraph 4.*[89]

The FMI Principles state that the conflicts of law issues that can arise in a multinational scenario should be addressed by a CCP:

> *Legal risk due to conflicts of law may arise if an FMI is, or reasonably may become, subject to the laws of various other jurisdictions (for example, when it accepts participants established in those jurisdictions, when assets are held in multiple jurisdictions, or when business is conducted in multiple jurisdictions). In such cases, an FMI should identify and analyse potential conflict-of-laws issues and develop rules and procedures to mitigate this risk. For example, the rules governing its activities should clearly indicate the law that is intended to apply to each aspect of an FMI's operations. The FMI and its participants should be aware of applicable constraints on their abilities to choose the law that will govern the FMI's activities when there is a difference in the substantive laws of the relevant jurisdictions. A jurisdiction ordinarily does not permit contractual choices of law that would circumvent that jurisdiction's fundamental public policy. Thus, when uncertainty exists regarding the enforceability of an FMI's choice of law in relevant jurisdictions, the FMI should obtain reasoned and independent legal opinions and analysis in order to address properly such uncertainty.*[90]

As a majority of counterparties to derivatives trades entered into by Canadian participants are resident outside of Canada, it is clear that Canadian market participants will require access to foreign CCPs to clear at least some OTC derivatives transactions. The Committee believes that the review and recognition (or exemption from recognition) of foreign-based CCPs is a priority to ensure that Canada meets its G20 commitments. Recognition of non-Canadian CCPs will require that Canadian regulators be comfortable that they can exert appropriate and effective regulatory powers over the foreign CCP, which in many cases will require Canadian regulators to develop cooperative regulation regimes with regulators outside of Canada. Work on developing memoranda of understanding with these non-Canadian regulators needs to be undertaken

[89] COE June 6, 2011, Art.23 ¶1-2.
[90] FMI Principles, p. 25.

immediately to ensure that Canadian regulators receive the information and co-operation required to oversee the non-Canadian CCPs that they have recognized or exempted from recognition. As well, ongoing work with international bodies to set data standards and continue to develop best practices must continue apace.

The Committee believes that regulators of a CCP, both domestic and foreign, should develop and commit to a clear, co-operative oversight framework that deals with the regulation of CCPs that are subject to multi-jurisdictional regulation. This framework should clarify the role of regulators in monitoring and directing the governance model, the rule-making process and the operations of a CCP during the ordinary course of a CCPs business and during periods of stress. The framework should clarify the rights and responsibilities of all relevant regulators and outline the ability of the regulators to take steps to address issues of local public interest while not prejudicing the rights of other regulators.

The recognition process for a foreign CCP will include the additional review of its home regulatory structure, to ensure it is comparable to Canadian CCP oversight, as well as a review of legal issues that are particular to cross-border clearing. Examples would include bankruptcy regimes, collateral requirements, ongoing information sharing, oversight and enforcement co-operation and mutual reliance. Canadian market regulators would seek to enter into appropriate memoranda of understanding with foreign regulatory agencies to deal with matters such as information sharing, cooperation in enforcement actions and investigations, consultation on rule modifications at the CCP, notice of regulatory or legislative changes, dedicated contact persons and communications procedures during periods of stress.

13.1 CCP Infrastructure

In Consultation Paper 91-401, the Committee presented three possibilities for clearing OTC derivatives for Canadian market participants: a foreign access model, a domestic stand-alone solution, and a domestic solution with international links or interoperability.

Regardless of the infrastructure that emerges, and noting that such infrastructure can evolve over time, the Committee believes that regulatory oversight requirements must be developed that ensure that Canadian market regulators are comfortable that there will be adequate oversight over the operations of the CCP. This report and its recommendations should be read to apply to each or any possible infrastructure, and rule drafting will need to provide such flexibility as the determination of the most appropriate infrastructure is beyond the scope of this document.

14. Further Questions for Public comment

Question 10. Generally, the Committee has endeavoured to follow international recommendations in the development of the recommendations for Canada in this paper. Are there recommendations that are inappropriate for the Canadian market?

Question 11. Are there changes to the existing regulatory framework that would be desirable to accommodate a move to CCP clearing?

Question 12. Do you consider that any changes need to be made to Canadian law to facilitate the efficiency of OTC derivatives clearing, either through a domestic or a foreign CCP? If so, what changes and for what reasons?

Appendix

Principles for Financial Markets Infrastructures, Summary of Principles[91]

Principle 1: Legal basis

An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Key considerations

1. *The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.*
2. *An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.*
3. *An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.*
4. *An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.*
5. *An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.*

Principle 2: Governance

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

Key considerations

1. *An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.*
2. *An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.*
3. *The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest.*

[91] http://www.bis.org/publ/cpss101a.pdf.

The board should review both its overall performance and the performance of its individual board members regularly.

4. *The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).*
5. *The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.*
6. *The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.*
7. *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. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.*

Principle 3: Framework for the comprehensive management of risks

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

Key considerations

1. *An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.*
2. *An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.*
3. *An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.*
4. *An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.*

Principle 4: Credit risk

An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.

Key considerations

1. *An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both. An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.*
2. *A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the system.*
3. *A CCP should cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources (see Principle 5 on collateral and Principle 6 on margin). In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains.*
4. *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. A CCP should have clear procedures to report the results of its stress tests to appropriate decision makers at the CCP and to use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and assumptions. 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. A CCP should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a CCP's participants increases significantly. A full validation of a CCP's risk-management model should be performed at least annually.

5. *In conducting stress testing, a CCP should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods. 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.*
6. *An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.*

Principle 5: Collateral

An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.

Key considerations

1. *An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.*
2. *An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.*
3. *In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.*
4. *An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.*
5. *An FMI that accepts cross-border collateral should mitigate the risks associated with*

its use and ensure that the collateral can be used in a timely manner.

6. *An FMI should use a collateral management system that is well-designed and operationally flexible.*

Principle 6: Margin

A CCP should cover its credit exposures to its participants for all products through an effective margin system that is risk-based and regularly reviewed.

Key considerations

1. *A CCP should have a margin system that establishes margin levels commensurate with the risks and particular attributes of each product, portfolio, and market it serves.*
2. *A CCP should have a reliable source of timely price data for its margin system. A CCP should also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable.*
3. *A CCP should adopt initial margin models and parameters that are risk-based and generate margin requirements sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default. Initial margin should meet an established single-tailed confidence level of at least 99 percent with respect to the estimated distribution of future exposure. For a CCP that calculates margin at the portfolio level, this requirement applies to each portfolio's distribution of future exposure. For a CCP that calculates margin at more-granular levels, such as at the subportfolio level or by product, the requirement must be met for the corresponding distributions of future exposure. The model should (a) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the CCP (including in stressed market conditions), (b) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products, and (c) to the extent practicable and prudent, limit the need for destabilising, procyclical changes.*
4. *A CCP should mark participant positions to market and collect variation margin at least daily to limit the build-up of current exposures. A CCP should have the authority and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.*
5. *In calculating margin requirements, a CCP may allow offsets or reductions in required margin across products that it clears or between products that it and another CCP clear, if the risk of one product is significantly and reliably correlated with the risk of the other product. Where two or more CCPs are authorised to offer cross-margining, they must have appropriate safeguards and harmonised overall risk-management systems.*
6. *A CCP should analyse and monitor its model performance and overall margin coverage by conducting rigorous daily backtesting and at least monthly, and more-frequent where appropriate, sensitivity analysis. A CCP should regularly conduct an assessment of the theoretical and empirical properties of its margin model for all products it clears. In conducting sensitivity analysis of the model's coverage, a CCP should take into account a wide range of parameters and assumptions that reflect possible market conditions, including the most-volatile periods that have been*

experienced by the markets it serves and extreme changes in the correlations between prices.

7. *A CCP should regularly review and validate its margin system.*

Principle 7: Liquidity risk

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.

Key considerations

1. *An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other entities.*
2. *An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.*
3. *A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or multiday settlement, of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions.*
4. *A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments, and meet other payment obligations on time with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions.*
5. *For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue,*

the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed.

6. *An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI*

   does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as a part of its liquidity plan.

7. *An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.*

8. *An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.*

9. *An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In conducting stress testing, an FMI 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. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers, and linked FMIs), and where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.*

10. *An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity*

resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.

Principle 8: Settlement finality

An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.

Key considerations

1. *An FMI's rules and procedures should clearly define the point at which settlement is final.*
2. *An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.*
3. *An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.*

Principle 9: Money settlements

An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.

Key considerations

1. *An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.*
2. *If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.*
3. *If an FMI settles in commercial bank money, it should monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity, and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks.*
4. *If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.*
5. *An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.*

Principle 10: Physical deliveries

An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries.

Key considerations

1. *An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.*
2. *An FMI should identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments or commodities.*

(Principle 11: Central Securities Depositories is not applicable to OTC Derivatives)

Principle 12: Exchange-of-value settlement systems

If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

Key consideration

1. *An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs.*

Principle 13: Participant-default rules and procedures

An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

Key considerations

1. *An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default.*
2. *An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.*
3. *An FMI should publicly disclose key aspects of its default rules and procedures.*
4. *An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.*

Principle 14: Segregation and portability

A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions.

Key considerations

1. *A CCP should, at a minimum, have segregation and portability arrangements that effectively protect a participant's customers' positions and related collateral from the default or insolvency of that participant. If the CCP additionally offers protection of such customer positions and collateral against the concurrent default of the participant and a fellow customer, the CCP should take steps to ensure that such protection is effective.*
2. *A CCP should employ an account structure that enables it readily to identify positions of a participant's customers and to segregate related collateral. A CCP should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts.*
3. *A CCP should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participant's customers will be transferred to one or more other participants.*
4. *A CCP should disclose its rules, policies, and procedures relating to the segregation and portability of a participant's customers' positions and related collateral. In particular, the CCP should disclose whether customer collateral is protected on an individual or omnibus basis. In addition, a CCP should disclose any constraints, such as legal or operational constraints, that may impair its ability to segregate or port a participant's customers' positions and related collateral.*

Principle 15: General business risk

An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

Key considerations

1. *An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.*
2. *An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.*

3. *An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.*
4. *Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.*
5. *An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.*

Principle 16: Custody and investment risks

An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.

Key considerations

1. *An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.*
2. *An FMI should have prompt access to its assets and the assets provided by participants, when required.*
3. *An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.*
4. *An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.*

Principle 17: Operational risk

An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.

Key considerations

1. *An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and*

manage operational risks.

2. *An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.*
3. *An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.*
4. *An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.*
5. *An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.*
6. *An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.*
7. *An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.*

Principle 18: Access and participation requirements

An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

Key considerations

1. *An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.*
2. *An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.*
3. *An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.*

Principle 19: Tiered participation arrangements

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

Key considerations

1. *An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.*
2. *An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.*
3. *An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.*
4. *An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.*

Principle 20: FMI links

An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.

Key considerations

1. *Before entering into a link arrangement and on an ongoing basis once the link is established, an FMI should identify, monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report.*
2. *A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link.*
3. *Linked CSDs should measure, monitor, and manage the credit and liquidity risks arising from each other. Any credit extensions between CSDs should be covered fully with high-quality collateral and be subject to limits.*
4. *Provisional transfers of securities between linked CSDs should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final.*
5. *An investor CSD should only establish a link with an issuer CSD if the arrangement provides a high level of protection for the rights of the investor CSD's participants.*
6. *An investor CSD that uses an intermediary to operate a link with an issuer CSD should measure, monitor, and manage the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary.*
7. *Before entering into a link with another CCP, a CCP should identify and manage the potential spill-over effects from the default of the linked CCP. If a link has three or*

more CCPs, each CCP should identify, assess, and manage the risks of the collective link arrangement.

8. *Each CCP in a CCP link arrangement should be able to cover, at least on a daily basis, its current and potential future exposures to the linked CCP and its participants, if any, fully with a high degree of confidence without reducing the CCP's ability to fulfil its obligations to its own participants at any time.*
9. *A TR should carefully assess the additional operational risks related to its links to ensure the scalability and reliability of IT and related resources.*

Principle 21: Efficiency and effectiveness

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

Key considerations

1. *An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.*
2. *An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.*
3. *An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.*

Principle 22: Communication procedures and standards

An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.

Key consideration

1. *An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.*

Principle 23: Disclosure of rules, key procedures, and market data

An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.

Key considerations

1. *An FMI should adopt clear and comprehensive rules and procedures that are fully*

disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.

2. *An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.*
3. *An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.*
4. *An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes.*
5. *An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO Disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.*