Chapter 6

Request for Comments

6.1.1 Proposed OSC Rule 24-503 Clearing Agency Requirements and Related Companion Policy

ONTARIO SECURITIES COMMISSION

NOTICE AND REQUEST FOR COMMENT ON
PROPOSED OSC RULE 24-503
CLEARING AGENCY REQUIREMENTS
AND RELATED COMPANION POLICY

I. INTRODUCTION

The Ontario Securities Commission (Commission, OSC or we) is publishing for a ninety (90)-day comment period proposed OSC Rule 24-503 *Clearing Agency Requirements* (Rule) and related Companion Policy 24-503CP to OSC Rule 24-503 *Clearing Agency Requirements* (CP). The comment period will end on **March 19, 2014**.

II. BACKGROUND AND PURPOSE OF RULE

Section 21.2 of the *Securities Act* (Ontario) (Act) prohibits clearing agencies from carrying on business in Ontario unless they are recognized as a clearing agency or are exempt from the recognition requirement.

The term "clearing agency" is defined in subsection 1(1) of the Act. It has two separate definitions: paragraph (a) of the definition applies to a clearing agency serving the securities markets; paragraph (b) of the definition applies to a clearing agency serving the derivatives markets.

Most entities that are securities clearing agencies act as, or perform the services of, one or more of the following:

- a central counterparty (CCP),
- a central securities depository (CSD), and
- a securities settlement system (SSS).

A derivatives clearing agency is typically only a CCP.

The Rule has several purposes. It sets out certain requirements in connection with the application process for recognition as a clearing agency by the Commission, or for exemption from the recognition requirement. Guidance on the OSC's regulatory approach to applications for recognition as a clearing agency or exemption from the recognition requirement is set out in the CP. The Rule also sets out on-going requirements for recognized clearing agencies that act as, or perform the services of, a CCP, CSD or SSS. These requirements are based largely on international standards applicable to financial market infrastructures (FMIs) developed jointly by the Committee on Payment and Settlement Systems (CPSS) of the Bank for International Settlements and the Board of the International Organization of Securities Commissions (IOSCO). In particular, the proposed Rule and CP incorporate newly strengthened international standards governing FMIs set out in the CPSS-IOSCO report *Principles for financial market infrastructures*, published in April 2012 (PFMI Report).[1] The Rule and CP will replace OSC Staff Notice 24-702 *Regulatory Approach to Recognition and Exemption from Recognition of Clearing Agencies*, which was based in part on previous CPSS-IOSCO international standards.[2]

The standards included in the PFMI Report are called "principles" (or the "PFMIs"). They are intended to enhance the safety and efficiency in clearing, settlement and recording arrangements, and more broadly, to limit systemic risk and foster transparency and financial stability. The PFMI Report is viewed as containing *minimum* international standards that must be applied

[1] The PFMI Report is available on the Bank for International Settlements' website (www.bis.org) and the IOSCO website (www.iosco.org).

[2] See the 2001 CPSS-IOSCO report *Recommendations for securities settlement systems* (together with the 2002 CPSS-IOSCO report *Assessment methodology for Recommendations for securities settlement systems*), and 2004 CPSS-IOSCO report *Recommendations for central counterparties*. All of these reports are available on the Bank for International Settlements' website (www.bis.org) and IOSCO website (www.iosco.org).

consistently on a global level to all systemically important FMIs, including CCPs, CSDs and SSSs.[3] Moreover, the new CPSS-IOSCO standards are intended to support the initiatives of the Group of Twenty Finance Ministers and Central Bank Governors (G20) and the Financial Stability Board (FSB) to strengthen core financial infrastructures and markets, including derivatives markets and critical market infrastructures. The global and uniform implementation of the new standards is considered to be crucial to meeting the G20 commitments for derivative markets regulatory reforms, including requirements for centralized clearing and data reporting.[4] Accordingly, the Commission considers the Rule and CP to be an important component of the efforts by the Canadian Securities Administrators (CSA) Derivatives Committee to develop a comprehensive regulatory framework for the trading of derivatives in Canada intended to implement the G20 commitments. We also believe that a rule-based framework is the preferred approach to adopting the new CPSS-IOSCO standards explicitly into Ontario securities law.

CPSS and IOSCO have stated that they expect full, timely and consistent implementation of the standards by the authorities in all member-jurisdictions. In this regard, they have established an international task force to monitor implementation of the standards by relevant authorities, including the OSC.[5]

We are publishing for a 90-day public comment period the proposed Rule and CP. We are seeking comment on all aspects of the Rule and CP, including on the specific issues raised in Part IV of this Notice. Readers are encouraged to read the Rule and CP alongside the PFMI Report. We note that the Rule and CP have been drafted to be consistent with the terminology and text used in the PFMI Report.

The comment period for this Notice will end on **March 19, 2014**. Please refer to Part XI of this Notice for information on the means for providing comment.

III. OVERVIEW OF RULE AND CP

Part 1 of the Rule sets out definitions, other interpretive provisions, and a scope provision.[6]

Part 2 of the Rule sets out certain requirements in connection with the application process for recognition as a clearing agency or exemption from the recognition requirement. The OSC's regulatory approach to such an application is set out in Part 2 of the CP.

Part 3 of the Rule, which adopts the principles of the PFMI Report, sets out the ongoing requirements for clearing agencies recognized in Ontario that act as, or perform the services of, a CCP, CSD or SSS. In general, the PFMI Report contains 23 headline *principles* applicable to clearing agencies, each with its own set of *key considerations* and more detailed *explanatory notes*. The Commission's approach to drafting Part 3 of the Rule was to generally incorporate all of the principles and key considerations within the Rule, to the extent possible. Part 3 also includes a small number of additional provisions that govern matters closely related to the principles and key considerations.

The Rule is supplemented by a CP. Part 3 of the CP incorporates, among other guidance, most of the explanatory notes contained in the PFMI Report. It also provides supplementary guidance (found in text boxes) that has been jointly developed by a working group (PFMI Coordinating Group) comprised of staff of the OSC, the Autorité des marchés financiers (AMF), the British Columbia Securities Commission (BCSC) and the Bank of Canada (BoC). The purpose of the supplementary guidance is to provide additional discussion and clarity on certain aspects of these new standards in the Canadian context that are not dealt with in the PFMI Report. The PFMI Coordinating Group has been cooperating and coordinating the implementation in Canada of the new CPSS-IOSCO standards.

3 Other FMIs are payment systems and trade repositories. Payment systems (which are not regulated by the OSC) and trade repositories are not covered by the Rule.

4 The G-20 commitments include requirements that all standardized over-the-counter derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties. Moreover, over-the-counter derivative contracts should be reported to trade repositories. Also, non-centrally cleared contracts should be subject to higher capital requirements.

5 Reports on PFMI implementation monitoring are available on the Bank for International Settlements' website (http://www.bis.org/cpss/index.htm) and the IOSCO website (http://www.iosco.org/library/index.cfm?section=pubdocs).

6 Part 1 of the Rule also includes a provision that is intended to address any potential conflict or inconsistency between a provision in Part 3 of the Rule and a provision of a proposed new rule (CSA Model Rule) being developed by the CSA Derivatives Committee (described in subsections 1.4(2) and 5.1(3) of the Rule as "Rule 91-*** *Model Provincial Rule – Derivatives – Customer Clearing: Protection of Customer Assets*"). The proposed CSA Model Rule, which will be published for comment subsequent to the date of this Notice, will include requirements on clearing agencies that act as CCPs for the clearing and settlement of trades in OTC derivatives. To the extent a provision of the Rule applies to a clearing agency that acts as a CCP for the clearing and settlement of trades in OTC derivatives, and a conflict or inconsistency may exist between the Rule and the proposed CSA Model Rule, the CSA Model Rule will prevail over the Rule. See Part IV of this Notice for a brief description of the proposed CSA Model Rule.

IV. SPECIFIC QUESTIONS

In this section, we identify and discuss certain key issues on which we are seeking specific comments. Responses to specific questions are solicited below.

(a) Systemically Important Clearing Agencies to Ontario

As discussed in subsections 2.0(4) to (7) of the CP, the Commission would generally require a clearing agency that is considered to be of "systemic importance" to the Ontario capital markets to be recognized, rather than be exempted from recognition as a clearing agency. Recognition by the Commission means that the clearing agency would become subject to Part 3 of the Rule if the clearing agency acts as, or performs any of the services of, a CCP, CSD or SSS. We have considered international precedent for determining the systemic importance of an FMI. In our view, the following are guiding factors to assess the systemic importance of a clearing agency to Ontario:

- value and volume of transactions processed, cleared and settled by the clearing agency for Ontario residents;
- risk exposures of the clearing agency to its Ontario-resident counterparties;
- complexity of the clearing agency; and
- centrality of the clearing agency to the Ontario capital markets.

We briefly expand on these factors in subsections 2.0(4) and (5) of the CP, and emphasize that the factors are non-exhaustive and that no single factor will be determinative in an assessment of systemic importance in Ontario. We may consider additional quantitative and qualitative factors as may be relevant and appropriate, such as the nature of a clearing agency's operations, its corporate structure, or its business model.

Question 1: ***Are there other factors that could be considered by the Commission in determining the systemic importance of a clearing agency to Ontario? If so, please describe such factors and your reasons for including them.***

(b) Segregation and Portability

Section 3.14 of the Rule requires all CCPs to have rules and procedures to enable the segregation and portability of positions of a CCP participant's customers and related collateral upon the default or insolvency of the participant. It is a principles-based requirement that adopts Principle 14 of the PFMI Report on segregation and portability (Principle 14). We note that, as currently drafted, section 3.14 of the Rule applies to all CCPs, serving the cash or derivatives markets, whether exchange-traded or over-the-counter-traded (OTC) products.

In February 2012, the CSA Derivatives Committee published CSA Consultation Paper 91-404 – *Derivatives: Segregation and Portability in OTC Derivatives Clearing* (Paper 91-404). The CSA Derivatives Committee is developing a proposed CSA model rule (CSA Model Rule) that would implement some of its recommendations in Paper 91-404, and be in line with Principle 14. The CSA Model Rule will contain detailed requirements for market participants, including CCPs serving the OTC derivatives markets, governing the segregation and portability of customer derivatives positions and related collateral assets. We have built into the Rule a provision that addresses any potential conflicts or inconsistencies that may exist between the CSA Model Rule and the Rule.[7]

We believe further analysis is required to determine the appropriate application of Principle 14 to CCPs serving markets other than the OTC derivatives markets. The broader application of Principle 14 to all (particularly cash market) CCPs may have, in certain circumstances, unintended consequences for existing customer protection frameworks. In this regard, Principle 14 offers an "alternate approach" to implementation in jurisdictions that have an existing legal regime which achieves the protection of customer assets in cash markets to the same degree as the approach required by Principle 14. Features of such legal regimes are that, if a participant fails, (a) the customer positions can be identified in a timely manner, (b) customers will be protected by an investor protection scheme designed to move customer accounts from the failed or failing participant to another participant in a timely manner, and (c) customer assets can be restored. As an example, the PFMIs suggest that domestic law may subject participants to explicit and comprehensive financial responsibility and customer protection requirements that obligate participants to make frequent determinations (for example, daily) that they maintain possession and control of all customers' fully paid and excess margin securities and to segregate their proprietary activities from those of their customers. Under these types of regimes, pending securities purchases do not belong to the customer; thus there is no customer trade or position entered into the CCP. As a result, participants who provide collateral to the CCP do not identify whether the collateral is provided on behalf of

7 See footnote 6 of this Notice.

their customers regardless of whether they are acting on a principal or agent basis, and the CCP is not able to identify positions or the assets of its participants' customers.

Particularly for certain cash market CCPs (e.g. the Canadian Depository for Securities Ltd.'s (CDS) continuous net settlement services (CNS)), once netting and novation have been completed, the CCP is not able to track customer positions directly. To do otherwise would require fundamental changes to the operations, and potentially the effectiveness of, these CCPs, as well as impact the market structure more broadly. In this regard, the requirements of Principle 14 may not be appropriate for certain cash markets.

As part of our efforts to implement the PFMI Report's standards, and in light of Principle 14's requirements and the prospect of an alternate approach for the cash markets, we are seeking specific input on the proper manner of applying Principle 14 in Ontario. At present, section 3.14 of the proposed Rule is drafted to require all CCPs to adhere to the minimum standards of Principle 14. However, we are of the preliminary view that the alternate approach is appropriate for some of Ontario's cash market CCPs. See section 3.14 of the CP, which discusses the Commission's view that it may grant an exemption from the requirements of section 3.14 of the Rule to a CCP that applies for such an exemption, if the alternate approach is appropriate for the CCP.

Question 2: ***Do you agree with the current drafting approach of section 3.14 of the Rule, ie, requiring all CCPs to meet Principle 14 in its entirety (without referencing the alternate approach), and granting exemptions on a case-by-case basis to those CCPs for which the alternate approach is appropriate?***

Question 3: ***Should all CCPs serving the Canadian cash markets be able to avail themselves of the alternate approach to implementation of Principle 14? How could such CCPs demonstrate that customer assets and positions are protected to the same degree envisioned by Principle 14?***

(c) Two Hour Timeframe for Resumption of Critical Information Technology Operations

Subparagraph 3.17(12)(c)(i) of the Rule requires a recognized clearing agency to develop and maintain a reasonable business continuity plan that is designed to ensure that critical information technology systems can resume operations within two hours following a disruptive event. This provision is consistent with the CPSS-IOSCO standard in Principle 17. We note that the two hour timeframe commences from the 'disruptive event'. While a resumption-timeframe of two hours after an event seems to be an emerging industry objective for FMIs, there appears to be some views that the two-hour resumption-timeframe should commence only after the declaration by the clearing agency of a 'disaster'. We recognize that, currently, a two hour timeframe for resuming operations from a disruptive event may pose operational difficulties for certain clearing agencies. However, we believe that a recognized clearing agency that performs any of the services of a CCP, CSD or SSS should maintain a reasonable business continuity plan that is designed to meet the two hour resumption period, in line with the emerging industry objective.

Question 4: ***What are a clearing agency's current abilities and future prospects to meet the objective of recovering and resuming critical systems and processes within two hours of a disruptive event? Should recovery and resumption-time objectives differ according to critical importance of markets?***

(d) Tiered Participation

Section 3.19 of the Rule governs so-called tiered participation arrangements. A tiered participation arrangement occurs when firms (indirect participants) rely on the services provided by other firms – who are direct participants of a clearing agency – to use the clearing agency's services. The dependencies and risk exposures (including credit, liquidity, and operational risks) inherent in these tiered arrangements can present risks to the clearing agency and its smooth functioning as well as to its participants and the broader financial markets. These risks are more likely to be material where there are indirect participants whose business through the clearing agency is a significant proportion of the clearing agency's overall business or is large relative to that of the direct participant through which they access the clearing agency's services.

Question 5: ***To what extent can a CCP identify and gather information about a tiered (indirect) participant?***

Question 6: ***In Canada, what types of risks (such as credit, liquidity, and operational risks) arise in tiered participation arrangements between customers and direct participants or between customers and other intermediaries that provide clearing services to such customers?***

Question 7: ***How can a clearing agency properly manage the risks posed by tiered participation arrangements?***

(e) Effective Dates and Transition

Depending on the conclusion and timing of the rule-making process, we would propose to seek approval of the final Rule in spring of 2014. As a result, we would expect that the Rule will be in force by June 30, 2014. However, the principles in the PFMI

Report represent a substantial strengthening of the previous CPSS-IOSCO standards on SSSs and CCPs. We recognize that clearing agencies will need time to implement the new standards, from both financial and operational perspectives. Therefore, we are proposing longer transition periods for implementing certain provisions of the Rule. Transitional effective dates are proposed for the following provisions of the Rule:

- *Sections 3.4 (Credit Risk), 3.5 (Collateral), 3.6 (Margin) and 3.7 (Liquidity risk)*: March 31, 2015, which is 9 months from June 30, 2014;

- *Paragraphs 3.3(3)(b) to (d) (Framework for comprehensive management of risks: requirements relating to recovery, orderly wind-down or resolution plans) and paragraph 3.15(3)(a) (General business risk: maintaining and implementing a viable recovery and orderly wind-down plan)*: January 1, 2016, which is 18 months from June 30, 2014.

- *Section 3.14 (Segregation and portability)*: same effective date as the proposed CSA Model Rule (on the assumption that the CSA Model Rule will be implemented after the implementation of the Rule);

- *Subparagraph 3.17(12)(c)(i) (Operational risks: resumption of critical IT systems within 2 hours from a disruptive event)*: June 30, 2015, which is 12 months from June 30, 2014; and

- *Section 3.19 (Tiered participation)*: June 30, 2015, which is 12 months from June 30, 2014.

Question 8: ***Are the above transition periods appropriate? If yes, please give your reasons. If not, what alternative transition periods would balance the CPSS-IOSCO's expectation of timely implementation of the PFMIs and the practical implementation needs of our markets?***

V. PUBLICATION OF SIMILAR RULES IN OTHER JURISDICTIONS AND COORDINATION BY PFMI COORDINATING GROUP

(a) Publication of Similar Rules in Other Jurisdictions

It is the Commission's understanding that the AMF intends to publish concurrently with the OSC a regulation substantially similar to the Ontario Rule and CP. We have also been advised by staff of the BCSC that they intend to work with other CSA jurisdictions to develop and publish a multi-lateral instrument that is materially the same as the Ontario Rule and CP.

(b) PFMI Coordinating Group

The PFMI Report notes that relevant authorities (including central banks and market regulators) are expected to incorporate the PFMIs in their legal and regulatory framework and oversight activities as soon as possible. Such authorities are also expected to cooperate in order to support each other in fulfilling their respective regulatory, supervisory, or oversight mandates with respect to FMIs. Consistent with these expectations, we have been cooperating and coordinating the implementation of the new CPSS-IOSCO standards in Canada with staff of the AMF, BCSC and BoC through the PFMI Coordinating Group.

The BoC has adopted the PFMIs as minimum requirements for clearing and settlement systems that it has designated as systemically important pursuant to the federal *Payment Clearing and Settlement Act*. In addition, the AMF, BCSC and BoC intend to coordinate a public consultation process with the OSC regarding the joint supplementary guidance which is presented in the CP, including respecting the timing of the consultation and the resolution of public comments received.

We will continue to work with the other Canadian authorities through the PFMI Coordinating Group to consider any additional guidance that may be necessary as a result of implementing the PFMIs in Canada. We expect additional guidance will be necessary in areas that are still being considered internationally (e.g. recovery and resolution planning, quantitative disclosure) or areas that are prone to different interpretation (e.g. liquidity risk).

VI. AUTHORITY FOR INSTRUMENT IN ONTARIO

The Rule is being made under the following provisions of the Act:

- Paragraph 11 of subsection 143(1) of the Act allows the Commission to make rules regulating the listing or trading of publicly traded securities or the trading of derivatives, including rules relating to clearing and settling trades.

- Paragraph 12 of subsection 143(1) of the Act allows the Commission to make rules regulating recognized clearing agencies, including prescribing requirements in respect of the review or approval by the Commission of any by-law, rule, procedure, interpretation or practice and prescribing restrictions on its ownership, control and direction.

VII. ALTERNATIVES TO INSTRUMENT CONSIDERED

Many of the provisions in the Rule are closely modeled on the CPSS-IOSCO standards set out in the PFMI Report. The Commission considered, as general alternatives, adopting the CPSS-IOSCO standards set out in the PFMI Report in a policy, or including them on a case-by-case basis as terms and conditions to a recognition order of a clearing agency. The Commission decided against these alternatives because it believes the PFMI standards should be contained in a rule to provide for greater transparency of clearing agency requirements and to promote consistency across all recognized clearing agencies that act as a CCP, CSD or SSS in carrying on business in Ontario.

VIII. UNPUBLISHED MATERIALS

In proposing the Rule and CP, the OSC did not rely on any significant unpublished study, report, or other material.

IX. ANTICIPATED COSTS AND BENEFITS

The purpose of the proposed Rule is to enhance the regulatory framework for recognized clearing agencies. This regulatory framework will facilitate ongoing compliance with the requirements of Ontario securities law. The Rule also enhances harmonization with and observance of international minimum standards applicable to clearing agencies. The Commission believes that these requirements will support resilient and cost-effective clearing agency operations, as well as promote transparency that would consequently support confidence among market participants in clearing agencies' ability to serve as efficient and financially stable mechanisms for clearance and settlement and to facilitate capital formation.

The Commission believes the proposed clearing agency regulatory framework should enhance confidence in the market and better serve market participants. With the adoption of the Rule, clearing agencies may be better positioned to withstand market volatility and evolve with market developments and technological advancements. Establishing rules that are consistent with current practice and international standards provides a good starting point for promoting appropriate risk management practices.

X. REGULATIONS OR OTHER INSTRUMENTS TO BE AMENDED OR REVOKED (ONTARIO)

OSC Staff Notice 24-702 *Regulatory Approach to Recognition and Exemption from Recognition of Clearing Agencies* will be withdrawn upon the implementation of the Rule and CP.

XI. COMMENT PROCESS

Please provide your comments in writing by **March 19, 2014**. If you are not sending your comments by email, an electronic file containing the submissions should also be provided (Windows format, Word). **Please deliver your comments to the following address**:

The Secretary
Ontario Securities Commission
20 Queen Street West, 22nd Floor
Toronto, Ontario M5H 3S8
Fax: 416-593-2318
E-mail: comments@osc.gov.on.ca

Please note that comments received will be made publicly available and posted at www.osc.gov.on.ca. We cannot keep submissions confidential because Ontario securities law requires that a summary of the written comments received during the comment period be published. In this context, you should be aware that some information which is personal to you, such as your e-mail and address, may appear in the websites. It is important that you state on whose behalf you are making the submission.

Additionally, **where comments pertain specifically to the supplementary guidance** developed jointly by the Canadian authorities (as presented in text boxes within the CP), it is requested that these particular **comments *also* be sent to the PFMI Coordinating Group as follows**:

Autorité des marchés financiers:
Email: consultation-en-cours@lautorite.qc.ca

Bank of Canada:
Email: PFMI-consultation@bankofcanada.ca

British Columbia Securities Commission:
Doug MacKay
Manager, Market and SRO Oversight
Email: dmackay@bcsc.bc.ca

Please refer your questions to any of:

Antoinette Leung
Manager, Market Regulation
Email: aleung@osc.gov.on.ca

Maxime Paré
Senior Legal Counsel, Market Regulation
Email: mpare@osc.gov.on.ca

Oren Winer
Legal Counsel, Market Regulation
Email: owiner@osc.gov.on.ca

December 18, 2013

OSC RULE 24-503
CLEARING AGENCY REQUIREMENTS

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PART I
DEFINITIONS, INTERPRETATION AND APPLICATION

Definitions

1.1 In this Rule,

"board of directors" includes, in the case of a recognized clearing agency that is not a company, a group of individuals that acts for the clearing agency in a capacity similar to a board of directors;

"central counterparty" means a person or company that interposes itself between the counterparties to securities or derivatives transactions in one or more financial markets, acting functionally as the buyer to every seller and the seller to every buyer or the counterparty to every party;

"central bank money" means a liability of a central bank in the form of deposits held at the central bank which can be used for settlement purposes;

"central securities depository" means a person or company that provides centralized facilities as a depository of securities, including securities accounts, central safekeeping services, and asset services, which may include the administration of corporate actions and redemptions;

"commercial bank money" means a liability of a commercial bank in the form of deposits held at the commercial bank which can be used for settlement purposes;

"concentration limit" means a limit imposed by a clearing agency that restricts a participant's ability to provide certain collateral assets above a specified threshold established by the clearing agency;

"CPSS-IOSCO FMI Disclosure Framework Document" means the disclosure document required to be completed regularly and disclosed publicly by financial market infrastructures in accordance with Principle 23 – *Disclosure of rules, key procedures, and market data* – of the April 2012 report *Principles for financial market infrastructures* published by the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO); and as more fully described in Annex A – *FMI disclosure template* – of the related December 2012 report *Principles for financial market infrastructures: Disclosure framework and Assessment methodology* published by CPSS and IOSCO;

"current exposure" means the loss that a clearing agency (or, in some cases, its participants) would face immediately if a participant were to default, being the market value or replacement cost of a transaction (or portfolio of transactions within a netting set) with the participant that would be lost upon the latter's default;

"exempt clearing agency" means a clearing agency that has been granted an order of the Commission pursuant to section 147 of the Act exempting it from the requirement in subsection 21.2(0.1) of the Act to be recognized by the Commission as a clearing agency;

"haircut", when used in relation to collateral received by a clearing agency to manage credit risk, means a risk control measure applied to the collateral whereby its value is calculated by the clearing agency as the market value of such collateral reduced by a certain percentage;

"initial margin", in relation to a clearing agency's margin system to manage credit exposures to its participants, means collateral that is required by the clearing agency to cover potential changes in the value of each participant's position (that is, potential future exposure) over an appropriate close-out period in the event the participant defaults;

"link" means, in relation to a clearing agency, a set of contractual and operational arrangements that directly or indirectly through an intermediary connects the clearing agency and one or more other systems or arrangements for the clearing or settlement of payments or securities or derivatives transactions;

"participant" means a person or company that has entered into an agreement with a clearing agency to access the services of the clearing agency and is bound by the clearing agency's rules and procedures;

"potential future exposure" means any potential credit exposure that a clearing agency could face at a future point in time arising from potential fluctuations in the market value of a participant's open positions between the time they are incurred (or reset to the current market price) and the time they are liquidated (or effectively hedged);

"procyclical" means the changes in risk-management requirements or practices that are positively correlated with business or credit cycle fluctuations and that may cause or exacerbate financial instability;

"product", when used in relation to a clearing agency's depository, clearance or settlement services, means a security or derivative, or class of securities or derivatives, or, where the context so requires, a trade or other transaction in or related to a security or derivative, or class of securities or derivatives, that is eligible for such services;

"securities settlement system" means a system that enables securities to be transferred and settled by book entry according to a set of predetermined multilateral rules;

"stress test" or "stress testing" means (except in subsection 3.17(5)) a test conducted periodically by a clearing agency to estimate credit and liquidity exposures that would result from the realization of extreme price changes to determine the amount and sufficiency of the clearing agency's total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions;

"variation margin", in relation to a clearing agency's margin system to manage credit exposures to its participants for all products it clears, means funds that are collected and paid out on a regular and *ad hoc* basis by the clearing agency to reflect current exposures resulting from actual changes in market prices.

Interpretation

1.2 In this Rule, each of the following terms has the same meaning as in National Instrument 52-107 *Accounting Principles and Auditing Standards*: "accounting principles", "auditing standards", "publicly accountable enterprises", "U.S. AICPA GAAS", "U.S. GAAP", and "U.S. PCAOB GAAS".

1.3 For the purposes of sections 3.4, 3.5 and 3.7, a person or company is also considered to be an affiliate of a participant (in this section, the person or company and the participant each described as a "party") where,

(a) a party holds directly or indirectly, otherwise than by way of security only, voting securities of the other party carrying at least 20 percent of the votes for the election of directors; or

(b) in the event paragraph (a) is not applicable,

(i) a party holds directly or indirectly, otherwise than by way of security only, an interest in the other party that allows it to direct the management or operations of the other party; or

(ii) financial information in respect of both parties is consolidated for financial reporting purposes.

Application

1.4 (1) Unless the context otherwise indicates, Part 3 of this Rule applies to a recognized clearing agency that acts as, or performs the services of, any of the following:

(a) a central counterparty;

(b) a central securities depository; or

(c) a securities settlements system.

(2) If there is a conflict or an inconsistency between a provision in Part 3 of this Rule and a provision of [Rule 91-*** *Model Provincial Rule – Derivatives – Customer Clearing: Protection of Customer Assets*] as they apply to a clearing agency that acts as a central counterparty for the clearing and settlement of trades in derivatives, the latter provision prevails.

PART 2
CLEARING AGENCY RECOGNITION OR EXEMPTION FROM RECOGNITION

Application and Initial Filing of Information

2.1 (1) An applicant for recognition as a clearing agency under section 21.2 of the Act, or for exemption from the requirement to be recognized as a clearing agency pursuant to section 147 of the Act, must include in its application package:

(a) the applicant's most recently completed CPSS-IOSCO FMI Disclosure Framework Document; and

(b) any additional relevant information sufficient to demonstrate that it is in the public interest for the Commission to recognize or exempt the applicant under section 21.2 or 147, as the case may be, of the Act.

(2) In addition to the requirement set out in subsection (1), an applicant whose head office or principal place of business is located outside of Ontario must,

(a) certify that it will provide the Commission with access to its books and records and will submit to onsite inspection and examination by the Commission;

(b) certify that it will provide the Commission with an opinion of legal counsel that,

(i) the applicant has the power and authority to provide the Commission with prompt access to its books and records; and

(ii) the applicant has the power and authority to submit to onsite inspection and examination by the Commission.

(3) In addition to the requirements set out in subsections (1) and (2), an applicant whose head office or principal place of business is located outside of Ontario must file a completed Form 24-503-F1 *Submission to Jurisdiction and Appointment of Agent for Service*.

(4) An applicant must inform the Commission in writing of any material change to the information provided in its application package, or if any of the information becomes materially inaccurate for any reason, as soon as the change occurs or the applicant becomes aware of any inaccuracy.

Significant Changes and Other Changes in Information

2.2 (1) In this section,

"notice and approval protocol" means a protocol or procedure, forming part of the terms and conditions of a clearing agency's recognition by the Commission, that governs, among other things, providing notice to the Commission of a significant change;

"significant change" includes, in relation to a recognized clearing agency,

(a) any change to the clearing agency's constating documents;

(b) any change to the clearing agency's by-laws;

(c) any change to the clearing agency's corporate governance or corporate structure, including any change to its ownership whether directly or indirectly;

(d) any material change to an agreement among the clearing agency and participants in connection with the clearing agency's operations and services, including those agreements to which the clearing agency is a party and those agreements among participants to which the clearing agency is not a party, but which are referred to in the clearing agency's rules or procedures and are made available by participants to the clearing agency;

(e) any material change to the clearing agency's rules, operating procedures, user guides, manuals, or other documentation governing or establishing the rights, obligations and relationships among the clearing agency and participants in connection with the clearing agency's operations and services;

(f) any material change to the design, operation or functionality of any of the clearing agency's operations and services;

(g) the establishment or removal of a link or any material change to an existing link;

(h) either directly or indirectly through an affiliate, commencing to engage in a new type of business activity or ceasing to engage in a business activity in which the clearing agency is then engaged; and

(i) any other matter identified as a significant change in the notice and approval protocol.

(2) Except as otherwise provided in the notice and approval protocol, a recognized clearing agency must not implement a significant change without the prior written approval of the Commission in accordance with the procedures set out in the notice and approval protocol.

(3) If a proposed significant change would affect the information set out in its CPSS-IOSCO FMI Disclosure Framework Document that is filed with the Commission, a recognized clearing agency must complete and file with the Commission an appropriate amendment to such document within the period and in accordance with the procedures set out in the notice and approval protocol.

(4) Except as otherwise provided in the notice and approval protocol, where a recognized clearing agency proposes to modify a fee or introduce a new fee for any of its clearing, settlement or depository services, the clearing agency must inform the Commission at least thirty business days before implementing the fee.

(5) Unless the exemption order provides otherwise, an exempt clearing agency must inform the Commission in writing of any material change to the information provided in its CPSS-IOSCO FMI Disclosure Framework Document that is filed with the Commission, or if any of the information becomes materially inaccurate for any reason, as soon as the change occurs or the exempt clearing agency becomes aware of any inaccuracy.

Ceasing to Carry on Business

2.3 (1) A recognized clearing agency or exempt clearing agency that intends to cease carrying on business in Ontario as a clearing agency must file a report on Form 24-503-F2 *Ceasing to Carry on Business* with the Commission,

(a) at least 180 days before ceasing to carry on business if a significant reason for ceasing to carry on business relates to the clearing agency's financial viability or any other matter that is preventing, or may potentially prevent, it from being able to provide its operations and services as a going concern; or

(b) at least 90 days before ceasing to carry on business for any other reason.

(2) A recognized clearing agency or exempt clearing agency that involuntarily ceases to carry on business in Ontario as a clearing agency must file a report on Form 24-503-F2 with the Commission as soon as practicable after it ceases to carry on that business.

Filing of Initial Audited Financial Statements

2.4 (1) An applicant must file audited financial statements for its most recently completed financial year with the Commission as part of its application under section 2.1.

(2) The financial statements referred to in subsection (1) must,

(a) be prepared in accordance with one of the following

(i) Canadian GAAP applicable to a publicly accountable enterprise,

(ii) IFRS, or

(iii) U.S. GAAP, if the person or company is incorporated or organized under the laws of the United States of America,

(b) identify in the notes to the financial statements the accounting principles used to prepare the financial statements,

(c) disclose the presentation currency, and

(d) be audited in accordance with,

(i) Canadian GAAS,

(ii) International Standards on Auditing, or

(iii) U.S. AICPA GAAS or U.S. PCAOB GAAS if the person or company is incorporated or organized under the laws of the United States of America.

(3) The financial statements referred to in subsection (1) must be accompanied by an auditor's report that,

(a) expresses an unmodified opinion, if the financial statements are audited in accordance with Canadian GAAS or International Standards on Auditing,

(b) expresses an unqualified opinion if the financial statements are audited in accordance with U.S. AICPA GAAS or U.S. PCAOB GAAS,

(c) identifies all financial periods presented for which the auditor's report applies,

(d) identifies the auditing standards used to conduct the audit,

(e) identifies the accounting principles used to prepare the financial statements,

(f) is prepared in accordance with the same auditing standards used to conduct the audit, and

(g) is prepared and signed by a person or company that is authorized to sign an auditor's report under the laws of a jurisdiction of Canada or a foreign jurisdiction, and that meets the professional standards of that jurisdiction.

Filing of annual audited and interim financial statements

2.5. (1) A recognized clearing agency or exempt clearing agency must file annual audited financial statements that comply with the requirements in subsections 2.4(2) and (3) with the Commission no later than the 90th day after the end of its financial year.

(2) A recognized clearing agency or exempt clearing agency must file interim financial statements that comply with the requirements in paragraphs 2.4(2)(a) and (2)(b) with the Commission no later than the 60th day after the end of each interim period.

Legal Entity Identifiers

2.6 (1) For the purposes of any recordkeeping and reporting requirements required under Ontario securities law, a recognized clearing agency or an exempt clearing agency must identify itself by means of a single legal entity identifier.

(2) Each of the following rules apply to legal entity identifiers:

(a) a legal entity identifier must be a unique identification code assigned to a clearing agency in accordance with the standards set by the Global Legal Entity Identifier System, and

(b) a clearing agency must comply with all applicable requirements imposed by the Global Legal Entity Identifier System.

(3) Despite subsection (2), if the Global Legal Entity Identifier System is unavailable to a clearing agency, all of the following rules apply:

(a) each clearing agency must obtain a substitute legal entity identifier which complies with the standards established by the LEI Regulatory Oversight Committee for pre-legal entity identifiers,

(b) a clearing agency must use the substitute legal entity identifier until a legal entity identifier is assigned to the clearing agency in accordance with the standards set by the Global Legal Entity Identifier System as required under paragraph (2)(a), and

(c) after the holder of a substitute legal entity identifier is assigned a legal entity identifier in accordance with the standards set by the Global Legal Entity Identifier System as required under paragraph (2)(a), the clearing agency must ensure that it is identified only by the assigned identifier.

(4) In this section,

(a) "Global Legal Entity Identifier System" means the system for unique identification of parties to financial transactions developed by the Legal Entity Identifier System Regulatory Oversight Committee; and

(b) "LEI Regulatory Oversight Committee" means the international working group established by the Finance Ministers and the Central Bank Governors of the Group of Twenty nations and the Financial Stability Board, under the Charter of the Regulatory Oversight Committee for the Global Legal Entity Identifier System dated November 5, 2012.

PART 3
ON-GOING REQUIREMENTS APPLICABLE TO RECOGNIZED CLEARING AGENCIES

Legal Framework

– ***General principle***

3.1 (1) A recognized clearing agency must establish, implement, maintain and enforce written policies and procedures reasonably designed to ensure a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities.

– ***Comprehensive and enforceable rules***

(2) The rules, procedures and related contracts of a recognized clearing agency must,

(a) be clear, understandable, and consistent with Ontario securities law;

(b) provide sufficient information to enable participants and, where relevant, participants' customers to have an accurate understanding of the rights and obligations of the participants and their customers;

(c) be reasonably designed to govern all aspects of the services offered by the clearing agency;

(d) be enforceable in Ontario; and

(e) provide a reasonable degree of certainty that actions taken by the clearing agency under its rules and procedures will not be voided, reversed, or subject to stays.

– ***Articulating legal basis***

(3) A recognized clearing agency must 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.

– ***Conflict-of-laws issues***

(4) Without limiting subsection (1), if a recognized clearing agency conducts business in multiple jurisdictions, the policies and procedures referred to in subsection (1) must be reasonably designed to identify and mitigate the risks arising from any potential conflicts of laws across jurisdictions.

Governance

– ***General principle***

3.2 (1) A recognized clearing agency must establish, implement and maintain written governance arrangements that are clear and transparent, promote the safety and efficiency of the clearing agency, support the stability of the broader financial system and other relevant public interest considerations, and properly balance the objectives of relevant stakeholders.

– ***Board of directors and documented governance arrangements***

(2) A recognized clearing agency must have,

(a) a board of directors, and

(b) documented governance arrangements that,

(i) provide clear and direct lines of responsibility and accountability;

(ii) are publicly disclosed on its Website;

(iii) clearly specify the roles and responsibilities of the board of directors; and

(iv) ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board of directors.

(3) The board of directors and management of the recognized clearing agency must have clearly documented governance procedures for their functioning, including procedures to,

(a) ensure performance accountability for board members and senior management, such as regular reviews of the board of director's overall performance and the performance of its individual board members;

(b) identify, address and manage any conflicts of interest issues that may arise; and

(c) manage possible risk spill over where the clearing agency provides services with a different risk profile than its depository, clearing, and settlement services.

– ***Board member skills and composition***

(4) The board of directors of a recognized clearing agency must include,

(a) individuals who have an appropriate level of skill, experience, knowledge and incentives to effectively and efficiently fulfill the board's multiple roles and responsibilities with respect to the clearing agency's operations, and

(b) appropriate representation by individuals who are independent of the clearing agency.

– ***Management roles, responsibilities and skills***

(5) Management of a recognized clearing agency must,

(a) have clearly specified and documented roles and responsibilities that include,

(i) active involvement in the clearing agency's risk control process including responsibility for ensuring that significant resources are devoted to its risk-management framework; and

(ii) responsibility for ensuring that the clearing agency's

(A) internal controls and related procedures are appropriately designed and executed, and;

(B) operations are consistent with the objectives, strategy and risk tolerance of the clearing agency, as determined by the board of directors;

(b) have the appropriate experience, mix of skills, and the integrity necessary to discharge its responsibilities for the operation and risk management of the clearing agency; and

(c) appoint a chief risk officer and a chief compliance officer, who must report directly to the board of directors or, if determined by the board of directors, to the chief executive officer of the clearing agency.

– ***Role of chief risk officer***

(6) A recognized clearing agency's chief risk officer must,

(a) have full responsibility and authority to maintain, implement and enforce the risk management framework established by the clearing agency, as required pursuant to this section and section 3.3;

(b) make recommendations to the clearing agency's board of directors regarding the clearing agency's risk management framework;

(c) monitor the effectiveness of the clearing agency's risk management framework on an ongoing basis; and

(d) report to the clearing agency's board of directors on a timely basis upon becoming aware of any significant deficiency with the risk management framework.

– *Role of chief compliance officer*

(7) A recognized clearing agency's chief compliance officer must,

(a) establish, implement, maintain and enforce written policies and procedures to identify and resolve conflicts of interest and ensure that the clearing agency complies with Ontario securities law;

(b) monitor compliance with the policies and procedures described under paragraph (a) on an ongoing basis;

(c) report to the board of directors of the clearing agency as soon as practicable upon becoming aware of any circumstance indicating that the clearing agency, or any individual acting on its behalf, is not in compliance with Ontario securities law and one or more of the following apply:

(i) the non-compliance creates a risk of harm to a participant,

(ii) the non-compliance creates a risk of harm to the broader financial system,

(iii) the non-compliance is part of a pattern of non-compliance, or

(iv) the non-compliance may have an impact on the ability of the clearing agency to carry on business in compliance with Ontario securities law;

(d) prepare and certify an annual report assessing compliance by the clearing agency, and individuals acting on its behalf, with Ontario securities law and submit the report to the board of directors; and

(e) report to the clearing agency's board of directors as soon as practicable upon becoming aware of a conflict of interest that creates a risk of harm to a participant or to the capital markets; and

(f) concurrently with submitting a report under paragraphs (c), (d) or (e), file a copy of such report with the Commission.

– *Risk management governance*

(8) The board of directors of a recognized clearing agency must establish a clear, documented risk-management framework that,

(a) includes the clearing agency's risk-tolerance policy,

(b) assigns responsibilities and accountability for risk decisions, and

(c) addresses decision making in crises and emergencies.

(9) Without limiting subsection (8), the board of directors of a recognized clearing agency must have in place a validation process of models used to manage risk that is independent of the development, implementation, and operation of the models and their methodologies.

(10) The validation process described in subsection (9) must be subjected to periodic independent review of its adequacy and effectiveness.

(11) The board of directors of a recognized clearing agency must ensure that the clearing agency's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders.

– *Board and advisory committees*

(12) The board of directors of a recognized clearing agency must establish and maintain one or more committees on risk management, finance and audit, whose mandates must include, at a minimum, the following:

(a) providing advice and recommendations to the board of directors to assist it in fulfilling its risk management responsibilities, including reviewing and assessing the clearing agency's risk management policies and procedures, the adequacy of the implementation of appropriate procedures to mitigate and manage such risks, and the clearing agency's participation standards and collateral requirements;

(b) ensuring adequate processes and controls are in place over the models used to quantify, aggregate, and manage the clearing agency's risks;

(c) monitoring the financial performance of the clearing agency and providing financial management oversight and direction to the business and affairs of the clearing agency; and

(d) a requirement that these committees,

(i) where the committee is a board committee, be chaired by a sufficiently knowledgeable individual who is an independent director, and

(ii) have an appropriate representation by individuals who are independent of the clearing agency.

– ***Transparency of major decisions***

(13) A recognized clearing agency must,

(a) clearly disclose to relevant stakeholders its major decisions; and

(b) disclose on its Website a major decision that has a broad market impact.

Framework for comprehensive management of risks

– ***General principle***

3.3 (1) A recognized clearing agency must have a clear and documented risk-management framework for comprehensively managing legal, credit, liquidity, operational and other risks.

– ***Policies, procedures and systems, etc.***

(2) A recognized clearing agency's risk management framework must,

(a) include 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 it;

(b) be subject to periodic review; and

(c) encourage its participants and, where relevant, their customers to manage and contain the risks they pose to the clearing agency.

(3) Without limiting subsections (1) and (2), the recognized clearing agency must,

(a) regularly review the material risks it bears from and poses to other entities (such as other clearing agencies, payments systems, trade repositories, settlement banks, liquidity providers, exchanges and other trading platforms, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks;

(b) 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;

(c) prepare appropriate plans for its recovery or orderly wind-down based on its assessment of scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern;

(d) where applicable, provide relevant authorities with the information needed for purposes of resolution planning;

(e) develop, implement and maintain information systems that enable it to,

(i) monitor and measure its aggregate risk exposures, including overall credit and liquidity exposures and limits, and the relationship between these exposures and limits;

(ii) manage individual risk exposures and the interdependencies between them; and

(iii) assess the impact of various economic and financial shocks that could affect it; and

(f) have comprehensive internal control processes to assist the board of directors and senior management to monitor and assess the adequacy and effectiveness of the clearing agency's risk-management policies, procedures, systems, and controls.

Credit risk

– ***General principles***

3.4 (1) A recognized clearing agency that acts as, or performs the services of, a central counterparty or securities settlement system must effectively measure, monitor, and manage its credit exposures to participants and those arising from its clearing and settlement processes.

(2) A recognized clearing agency that performs the services of a securities settlement system must cover its current exposures and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources.

(3) A recognized clearing agency that acts as a central counterparty must cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources.

(4) A recognized clearing agency that acts as a central counterparty must maintain, in addition to the financial resources described in subsection (3), 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 clearing agency in extreme but plausible market conditions.

(5) Notwithstanding subsection (4), if the Commission determines that a recognized clearing agency that acts as a central counterparty is involved in activities with a more-complex risk profile or is systemically important in multiple jurisdictions, the clearing agency must maintain, in addition to the financial resources described in subsection (3), 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 clearing agency in extreme but plausible market conditions.

– ***Identifying, measuring and monitoring credit exposures***

(6) Without limiting subsection (1), a recognized clearing agency must,

(a) establish a robust framework to manage its credit exposures (whether current exposures, potential future exposures, or both) to its participants and the credit risks arising from its clearing and settlement processes; and

(b) identify sources of credit risk, routinely measure and monitor its credit exposures, and use appropriate risk-management tools to control these risks.

– ***Documenting governance arrangements***

(7) A recognized clearing agency that acts as a central counterparty must document its supporting rationale for, and have appropriate governance arrangements relating to, the amount of total financial resources it maintains.

– ***Stress testing***

(8) A recognized clearing agency that acts as a central counterparty must,

(a) at least on a daily basis, conduct rigorous stress testing to,

(i) determine the sufficiency of its total financial resources available in the event of one or more participant defaults in extreme but plausible market conditions,

(ii) report the results of the stress tests to its management, and

(iii) use the results of the stress tests to evaluate the adequacy of, and adjust as necessary, its total financial resources;

(b) regularly, at least on a monthly basis, perform comprehensive and thorough analyses of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining the clearing agency's required level of default protection in light of current and evolving market conditions; and

(c) regularly, at least on a yearly basis, perform a full validation of its risk management model.

(9) Notwithstanding paragraph (8)(b), a recognized clearing agency that acts as a central counterparty must perform the analysis of stress testing described in that paragraph more frequently when,

(a) the products cleared or markets served display high volatility or become less liquid, or

(b) the size or concentration of positions held by the clearing agency's participants increases significantly.

(10) In conducting stress testing, the recognized clearing agency that acts as a central counterparty must consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods, including the following scenarios:

(a) relevant peak historic price volatilities;

(b) shifts in other market factors such as price determinants and yield curves;

(c) multiple defaults over various time horizons;

(d) simultaneous pressures in funding and asset markets; and

(e) a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.

– ***Uncovered credit losses***

(11) A recognized clearing agency must have explicit rules and procedures to address any credit losses resulting from one or more defaults among its participants.

(12) The recognized clearing agency's rules and procedures required by subsection (11) must also address,

(a) how potentially uncovered credit losses would be allocated, including the repayment of any funds the clearing agency may borrow from liquidity providers; and

(b) the process for replenishing any financial resources employed by the clearing agency during a stress event.

Collateral

– ***General principle***

3.5 (1) A recognized clearing agency that acts as, or performs the services of, a central counterparty or securities settlement system and that requires collateral to manage its or its participants' credit exposure must,

(a) accept collateral with low credit, liquidity, and market risks, and

(b) set and enforce appropriately conservative haircuts and concentration limits on collateral that it collects.

– ***Valuation practices and haircuts***

(2) A recognized clearing agency must establish, implement and maintain prudent collateral acceptance and valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions for the purpose of reasonably assuring itself of the collateral's value in the event of liquidation.

(3) Without limiting subsections (1) and (2), the recognized clearing agency must,

(a) not allow a participant to post its own debt or equity securities, or debt or equity securities issued by an affiliate of the participant, as collateral;

(b) mitigate against specific wrong-way risk by limiting the acceptance of collateral that would likely lose value in the event that the participant providing the collateral defaults;

(c) at a minimum, mark the collateral it receives to market daily; and

(d) independently validate its haircut procedures at least annually.

– ***Limiting procyclicality***

(4) For the purposes of paragraph (1)(b), a recognized clearing agency must establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent, in order to reduce the need for procyclical adjustments.

– ***Concentrations limits or charges***

(5) A recognized clearing agency must establish, implement and maintain appropriate concentration limits or charges across all acceptable asset classes of collateral to avoid concentrated holdings of certain assets which would significantly impair its ability to liquidate such assets quickly without adverse price effects.

(6) The recognized clearing agency must periodically review the concentration limits or charges described in subsection (5) to determine their adequacy.

– ***Cross-border collateral***

(7) A recognized clearing agency that accepts cross-border collateral must mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.

– ***Collateral management systems***

(8) A recognized clearing agency must use a collateral management system that is well-designed and operationally flexible.

Margin

– ***General principle***

3.6 (1) A recognized clearing agency that acts as a central counterparty must cover its credit exposures to its participants for all products through an effective margin system that is risk-based and regularly reviewed.

– ***Margin system***

(2) Without limiting subsection (1), the margin system should be designed to establish margin levels commensurate with risks and particular attributes of each product, portfolio, and market that the clearing agency serves.

– ***Price information***

(3) A recognized clearing agency that acts as a central counterparty must have,

(a) a reliable source of timely price data for its margin system; and

(b) procedures and valuation models for addressing circumstances in which pricing data are not readily available or reliable.

– ***Initial margin methodology***

(4) A recognized clearing agency that acts as a central counterparty must 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.

(5) For the purposes of subsection (4),

(a) initial margin must meet an established single-tailed confidence level of at least 99 percent with respect to the estimated distribution of future exposure; and

(b) the initial margin model must,

(i) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the clearing agency (including in stressed market conditions);

(ii) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products; and

(iii) to the extent practicable and prudent, limit the need for destabilising, procyclical changes.

(6) Where the recognized clearing agency calculates initial margin,

(a) at the portfolio level, the requirement of paragraph (5)(a) must apply to each portfolio's distribution of future exposure; or

(b) at more-granular levels, such as at the subportfolio level or by product, the requirement of paragraph (5)(a) must be met for the corresponding distributions of future exposure.

– ***Variation margin***

(7) A recognized clearing agency that acts as a central counterparty must,

(a) mark participant positions to market and collect variation margin at least daily to limit the build-up of current exposures; and

(b) have the authority and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.

– ***Portfolio margining and cross-margining***

(8) Subject to the provisions of section 3.14, in calculating margin requirements, a recognized clearing agency that acts as a central counterparty may allow offsets or reductions in required margin across products that it clears or between products that it and another central counterparty clear, provided that the risk of one product is significantly and reliably correlated with the risk of the other product.

(9) Where the recognized clearing agency is authorized to offer cross-margining with one or more other central counterparties, it and the other central counterparties must have appropriate safeguards and harmonised overall risk-management systems.

– ***Testing model coverage and validation of margin methodology***

(10) A recognized clearing agency that acts as a central counterparty must,

(a) analyse and monitor its model performance and overall margin coverage by conducting rigorous,

(i) daily backtesting, and

(ii) at least monthly, and more frequently where appropriate, sensitivity analysis;

(b) regularly conduct an assessment of the theoretical and empirical properties of its margin model for all products it clears; and

(c) regularly review and validate its margin system.

(11) In conducting sensitivity analysis of the model's coverage under subparagraph (10)(a)(ii), the clearing agency must 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 of products it clears.

– *Timeliness of margin payments*

(12) A recognized clearing agency that acts as a central counterparty must establish and rigorously enforce timelines for margin collections and payments and set appropriate consequences for failure to pay on time.

Liquidity risk

– *General principles*

3.7 (1) A recognized clearing agency that acts as, or performs the services of, a central counterparty or securities settlement system must effectively measure, monitor, and manage its liquidity risk.

(2) The recognized clearing agency must 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 clearing agency in extreme but plausible market conditions.

– *Sources of, and managing, liquidity risk*

(3) A recognized clearing agency must have a robust framework to manage its liquidity risks from its participants, settlement banks, *nostro* agents, custodian banks, liquidity providers, and other entities.

– *Measuring and monitoring liquidity risk*

(4) A recognized clearing agency must 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.

– *Maintaining sufficient liquid resources*

(5) A recognized clearing agency that performs the services of a securities settlement system, including one that employs a deferred net settlement mechanism, must 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.

(6) A recognized clearing agency that acts as a central counterparty must 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 clearing agency in extreme but plausible market conditions.

(7) Notwithstanding subsection (6), if the Commission determines that a recognized clearing agency that acts as a central counterparty is involved in activities with a more-complex risk profile or is systemically important in multiple jurisdictions, the clearing agency must 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 clearing agency in extreme but plausible market conditions.

– *Qualifying liquid resources*

(8) Only the following liquidity resources of a recognized clearing agency are eligible for the purpose of meeting the requirements to maintain sufficient liquid resources under subsections (5), (6) and (7):

(a) cash in the currency of the requisite obligations, held either at the central bank of issue or at a commercial bank that meets the clearing agency's strict criteria under subsection 3.9(4);

(b) committed lines of credit;

(c) committed foreign exchange swaps;

(d) committed repurchase agreements; or

(e) highly marketable collateral held in custody and investments that are readily available and convertible into cash pursuant to prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions.

(9) For the purposes of subsection (8), if the clearing agency has access to routine credit at the central bank of issue, the clearing agency 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.

– ***Other liquid resources***

(10) If a recognized clearing agency maintains financial resources in addition to those eligible under subsections (8) and (9) to satisfy the sufficient liquid resources requirements, then those resources must be in the form of assets that are likely to be saleable with proceeds available promptly or acceptable as collateral for lines of credit, swaps, or repurchase agreements on an ad hoc basis following a default, even if this saleability or acceptability as collateral cannot be reliably prearranged or guaranteed in extreme market conditions.

(11) The recognized clearing agency should consider maintaining collateral that is typically accepted by a central bank of issue for any currency in which it may have settlement obligations, but must not assume the availability of emergency central bank credit as a part of its liquidity plan.

– ***Due diligence of liquidity providers***

(12) A recognized clearing agency must undertake rigorous due diligence to assure itself that each provider of its eligible liquid resources under subsections (8) and (9), whether a participant of the clearing agency 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.

(13) For the purposes of subsection (12), 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.

(14) The recognized clearing agency must regularly test its procedures for accessing its liquid resources at a liquidity provider.

– ***Central bank services***

(15) A recognized clearing agency with access to central bank accounts, payment services, or securities services must use these services, where practical, to enhance its management of liquidity risk.

– ***Stress testing of liquidity needs and resources***

(16) A recognized clearing agency must,

(a) determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing, and

(b) have clear procedures to

(i) report the results of its stress tests to appropriate decision makers at the clearing agency, and

(ii) use these results to evaluate the adequacy of and adjust its liquidity risk-management framework.

(17) In conducting stress testing, the recognized clearing agency must consider a wide range of relevant scenarios, including,

(a) relevant peak historic price volatilities,

(b) shifts in other market factors such as price determinants and yield curves,

(c) multiple defaults over various time horizons,

(d) simultaneous pressures in funding and asset markets, and

(e) a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.

(18) For the purposes of subsection (17), scenarios must also take into account the design and operation of the clearing agency, include all entities that may pose material liquidity risks to the clearing agency, such as settlement banks, *nostro* agents, custodian banks, liquidity providers, and linked clearing agencies, trade repositories and payment systems, and where appropriate, cover a multiday period.

(19) A recognized clearing agency must at all times document its supporting rationale for, and have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.

– ***Contingency planning for uncovered liquidity shortfalls***

(20) A recognized clearing agency must establish explicit rules and procedures that,

(a) enable it 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;

(b) address unforeseen and potentially uncovered liquidity shortfalls which aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations; and

(c) indicate the clearing agency's process to replenish any liquidity resources it may employ during a stress event.

Settlement finality

– ***General principles***

3.8 (1) A recognized clearing agency that acts as, or performs the services of, a central counterparty or securities settlement system must provide clear and certain final settlement, at a minimum by the end of the value date.

(2) Where necessary, the clearing agency must provide final settlement intraday or in real time.

– ***Final settlement***

(3) Without limiting subsection (1), the clearing agency's rules and procedures must clearly define the point,

(a) at which settlement is final; and,

(b) after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.

Money settlements

– ***General principles***

3.9 (1) A recognized clearing agency that acts as, or performs the services of, a central counterparty or securities settlement system must conduct its money settlements in central bank money, where practical and available.

(2) Where central bank money is not used, the clearing agency must,

(a) conduct its money settlements using a settlement asset with little or no credit or liquidity risk, and

(b) minimize and strictly control the credit and liquidity risk arising from the use of commercial bank money.

– ***Commercial bank money***

(3) Without limiting subsection (2), where the clearing agency settles in commercial bank money, it must,

(a) monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks; and

(b) monitor and manage the concentration of credit and liquidity exposures to the commercial settlement banks.

(4) For the purposes of paragraph (3)(a), the clearing agency must establish and monitor adherence to strict criteria for its commercial settlement banks that take account of, among other things, their,

(a) regulation and supervision,

(b) creditworthiness,

(c) capitalisation,

(d) access to liquidity, and

(e) operational reliability.

– *Settlement on books of clearing agency*

(5) Where the clearing agency conducts money settlements on its own books, it must minimize and strictly control its credit and liquidity risks.

– *Finality of funds transfers between settlement accounts*

(6) The clearing agency's legal agreements with any commercial settlement banks must state clearly,

(a) when transfers on the books of individual settlement banks are expected to occur,

(b) that transfers are to be final when effected, and

(c) that funds received are to be transferable as soon as possible and, at a minimum, by the end of the day.

Physical deliveries

– *General principle*

3.10 (1) A recognized clearing agency must,

(a) clearly state in its rules and procedures its obligations with respect to the delivery of physical instruments or commodities, and

(b) identify, monitor and manage the risks and costs associated with the storage and delivery of physical instruments and commodities.

Central securities depositories

– *General principle*

3.11 (1) A recognized clearing agency that acts as a central securities depository must,

(a) have appropriate rules, procedures and controls, including robust accounting practices, to help ensure the integrity of securities issues and minimize and manage the risks associated with the safekeeping and transfer of securities; and

(b) maintain securities in an immobilized or dematerialized form for their transfer by book entry.

– *Safeguarding integrity of securities issues*

(2) Without limiting subsection (1), where it acts as a central securities depository, a recognized clearing agency must,

(a) safeguard the rights of securities issuers and holders,

(b) prevent the unauthorised creation or deletion of securities,

(c) conduct periodic and at least daily reconciliation of securities issues it maintains, and

(d) prohibit overdrafts and debit balances in securities accounts.

– *Protection of assets*

(3) A recognized clearing agency that acts as a central securities depository must protect assets against custody risk through appropriate rules and procedures consistent with its legal framework.

(4) The clearing agency must also,

(a) employ a robust system that ensures segregation between its own assets and the securities of its participants and segregation among the securities of participants, and

(b) where supported by the legal framework, support operationally the segregation of securities belonging to a participant's customers on the participant's books and facilitate the transfer of customer holdings.

– *Other activities*

(5) Where a clearing agency acts as a central securities depository and provides services other than central safekeeping and administration of securities, it must identify, measure, monitor, and manage the risks associated with those activities.

Exchange-of-value settlement systems

– *General principle*

3.12 (1) Where a recognized clearing agency acts as, or performs the services of, a central counterparty or securities settlement system and settles transactions that involve the settlement of two linked obligations, it must eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other, regardless of whether the clearing agency settles on a gross or net basis and when finality occurs.

Participant default rules and procedures

– *General principles*

3.13 (1) A recognized clearing agency must have effective and clearly defined rules and procedures to manage a participant default.

(2) The clearing agency's rules and procedures under subsection (1) must be designed to ensure that the clearing agency can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

– *Use and sequencing of financial resources*

(3) The rules and procedures of a recognized clearing agency must specify the order in which different types of financial resources that the clearing agency maintains for covering losses and containing liquidity pressures arising from a participant default, including liquidity facilities, will be used to contain such losses and liquidity pressures.

– *Default rules and procedures*

(4) Without limiting subsections (1) to (3), the recognized clearing agency's default rules and procedures must clearly describe:

(a) the circumstances that constitute a participant default,

(b) whether a declaration of default by the clearing agency is automatic or discretionary, and if discretionary, which person or group shall exercise that discretion,

(c) the actions that the clearing agency can take when a default is declared, and the extent to which such actions are automatic or discretionary,

(d) potential changes to its normal settlement practices, should these changes be necessary in extreme circumstances,

(e) the management of transactions at different stages of processing,

(f) the expected treatment of proprietary and customer transactions and accounts,

(g) the probable sequencing of its actions in response to a participant default,

(h) the roles, obligations, and responsibilities of the various parties, including non-defaulting participants, and

(i) the existence of other mechanisms that may be activated to contain the impact of a default.

(5) A recognized clearing agency must publicly disclose on its Website key aspects of its default rules and procedures.

– ***Testing of default procedures***

(6) A recognized clearing agency must involve its participants and other stakeholders in the testing and review of the clearing agency's default rules and procedures, including any close-out procedures.

(7) The testing and review described in subsection (6) must be conducted at least annually or following material changes to the clearing agency's default rules and procedures to ensure that they are practical and effective.

– ***Use of own capital***

(8) A recognized clearing agency that acts as a central counterparty must dedicate and use a reasonable portion of its own capital to cover losses resulting from one or more participant defaults prior to applying the collateral of, or other prefunded financial resources contributed by, the non-defaulting participants.

Segregation and portability

– ***General principles***

3.14 (1) A recognized clearing agency that acts as a central counterparty must have rules and procedures that provide for the segregation and portability of positions of a participant's customers and the collateral provided to it with respect to those positions.

(2) The segregation and portability arrangements provided for in the clearing agency's rules and procedures under subsection (1) must, at a minimum, effectively protect a participant's customers' positions and related collateral from the default or insolvency of that participant.

– ***Fellow customer default***

(3) To the extent that, in addition to the protection described in subsection (2), the clearing agency offers to protect a participant's customers' positions and related collateral from the concurrent default or insolvency of the participant and a fellow customer, the clearing agency must take steps to ensure that such protection is effective.

– ***Customer account structures and transfer of positions and collateral***

(4) To ensure effective segregation and portability arrangements in accordance with this section, the clearing agency must:

(a) employ an account structure that,

(i) allows the clearing agency to readily identify positions of a participant's customers and to segregate related collateral; and

(ii) is comprised of individual customer accounts or omnibus customer accounts; and

(b) 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.

– ***Disclosure***

(5) A recognized clearing agency that acts as a central counterparty must publicly disclose on its Website,

(a) its rules, policies, and procedures relating to the segregation and portability of a participant's customers' positions and related collateral, including whether customer collateral is protected on an individual or omnibus basis; and

(b) any constraints, such as legal or operational constraints, that may impair its ability to segregate or port the participant's customers' positions and related collateral.

General business risk

– *General principles*

3.15 (1) A recognized clearing agency must,

(a) have robust management and control systems to identify, monitor, and manage its general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses, and

(b) hold sufficient liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise.

(2) The clearing agency's liquid net assets for the purposes of paragraph (1)(b) must at all times 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.

– *Determining sufficiency of liquid net assets*

(3) A recognized clearing agency must,

(a) maintain a viable recovery or orderly wind-down plan approved by the board of directors, and

(b) hold sufficient liquid net assets funded by equity to implement the plan that are:

(i) at a minimum, equal to at least six months of the clearing agency's current operating expenses, and

(ii) in addition to the clearing agency's resources available to cover participant defaults and other risks required to be covered pursuant to sections 3.4 to 3.7.

(4) For the purposes of paragraph (3)(b), the assets held to cover the clearing agency's general business risk must be of high quality and sufficiently liquid in order to allow the clearing agency to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.

(5) The recognized clearing agency must,

(a) maintain a viable plan for raising additional equity should its equity fall close to or below the amount required under paragraph (3)(b); and

(b) have the plan described in paragraph (a) approved by the board of directors and updated regularly.

Custody and investment risks

– *General principles*

3.16 (1) A recognized clearing agency must safeguard its own and its participants' assets and minimize the risk of loss on and delay in access to these assets.

(2) The clearing agency's investments must be in instruments with minimal credit, market, and liquidity risks.

– *Use of custodians*

(3) Without limiting subsection (1), the recognized clearing agency must,

(a) hold its own and its participants' assets at supervised or regulated banks or custodians that have robust accounting practices, safekeeping procedures, and internal controls that fully protect such assets;

(b) when required, have prompt access to its assets and the assets provided by participants; and

(c) evaluate and understand its exposures to its banks and custodians, taking into account the full scope of its relationships with each.

– *Investment strategy*

(4) Without limiting subsection (2), a recognized clearing agency's investment strategy must,

(a) be consistent with the clearing agency's overall risk-management strategy;

(b) be publicly disclosed on its Website;

(c) limit the clearing agency's investments to instruments that are secured by, or claims on, high-quality obligors; and

(d) allow the clearing agency to liquidate its investments quickly with little, if any, adverse price effect.

Operational risks

– *General principles*

3.17 (1) A recognized clearing agency must 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.

(2) The clearing agency's systems must be designed to ensure a high degree of security and operational reliability and have adequate, scalable capacity.

(3) The clearing agency's business continuity management must aim for timely recovery of operations and fulfillment of the clearing agency's obligations, including in the event of a wide-scale or major disruption.

– *Identifying sources of operational risk, operational risk management, and operational reliability*

(4) Without limiting subsection (1), the clearing agency must ensure the following:

(a) the clearing agency has a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks;

(b) the clearing agency's board of directors clearly defines the roles and responsibilities for addressing operational risk and endorses the clearing agency's operational risk-management framework;

(c) the clearing agency's systems, operational policies, procedures, and controls are reviewed, audited, and tested periodically and after significant changes; and

(d) the clearing agency has clearly defined operational reliability objectives, and policies in place that are designed to achieve those objectives.

– *Operational capacity, systems requirements, and incident management*

(5) Without limiting subsection (2), a recognized clearing agency must,

(a) ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives;

(b) have comprehensive physical and information security policies that address potential vulnerabilities and threats;

(c) develop and maintain,

(i) an adequate system of internal controls over its systems that support the clearing agency's operations and services, and

(ii) 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; and

(d) in accordance with prudent business practice, on a reasonably frequent basis and, in any event, at least annually,

(i) make reasonable current and future capacity estimates,

(ii) conduct capacity stress tests to determine the ability of those systems to process transactions in an accurate, timely and efficient manner, and

(e) promptly notify the Commission of any material systems failure, malfunction or delay or other incident disruptive to the clearing agency's operations, or any breach of data security, integrity or confidentiality, and provide to the Commission a post-incident report that includes a root-cause analysis as soon as practicable.

(6) For each of the systems referred to in paragraph 5(c), a recognized clearing agency must annually engage a qualified party to conduct an independent systems review and prepare a report in accordance with established audit standards to ensure that it is in compliance with paragraphs (5)(c) and (d) and subsection (12).

(7) A recognized clearing agency must provide the report resulting from the review conducted under subsection (6) to,

(a) its board of directors, or audit committee, promptly upon the report's completion; and

(b) the Commission within 30 days of providing the report to its board of directors or audit committee.

(8) A recognized clearing agency must make publicly available, in their final form, all technology requirements regarding interfacing with or accessing the clearing agency,

(a) if operations have not begun, sufficiently in advance of operations to allow a reasonable period for testing and system modification by participants, and

(b) if operations have begun, sufficiently in advance of implementing a material change to technology requirements to allow a reasonable period for testing and system modification by participants.

(9) After complying with subsection (8), a recognized clearing agency must make available testing facilities for interfacing with or accessing the clearing agency,

(a) if operations have not begun, sufficiently in advance of operations to allow a reasonable period for testing and system modification by participants, and

(b) if operations have begun, sufficiently in advance of implementing a material change to technology requirements to allow a reasonable period for testing and system modification by participants.

(10) A recognized clearing agency must not begin operations in Ontario until it has complied with paragraphs (8)(a) and (9)(a).

(11) Paragraphs (8)(b) and (9)(b) do not apply to a recognized clearing agency if,

(a) the change to its technology requirements must be made immediately to address a failure, malfunction or material delay of its systems or equipment,

(b) the clearing agency immediately notifies the Commission of its intention to make the change to its technology requirements, and

(c) the clearing agency publicly discloses on its Website the changed technology requirements as soon as practicable.

– ***Business continuity plan***

(12) Without limiting subsection (3), a recognized clearing agency must develop and maintain a reasonable business continuity plan, including a disaster recovery plan, that,

(a) addresses events posing a significant risk of disrupting the clearing agency's operations, including events that could cause a wide-scale or major disruption;

(b) incorporates the use of a secondary site;

(c) is designed to

(i) ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events; and

(ii) enable the clearing agency to complete settlement by the end of the day of the disruption, even in extreme circumstances; and

(d) is tested on a reasonably frequent basis and, in any event, at least annually.

(13) A recognized clearing agency must identify and keep current a record of all potential single points of failure in its operations.

– ***Interdependencies, including outsourcing***

(14) A recognized clearing agency must identify, monitor, and manage the risks that,

(a) key participants, other clearing agencies, trade repositories, payment systems, and service and utility providers may pose to its operations; and

(b) its operations may pose to other clearing agencies, trade repositories, and payment systems.

(15) If a recognized clearing agency outsources a critical service or system to a service provider, including to an affiliate or associate of the clearing agency, the clearing agency must,

(a) establish, implement, maintain and enforce written policies and procedures for the selection of service providers to which a critical service and system may be outsourced and for the evaluation and approval of those outsourcing arrangements;

(b) identify any conflicts of interest between the clearing agency and the service provider to which a critical service and system is outsourced, and establish, implement, maintain and enforce written policies and procedures to mitigate and manage those conflicts of interest;

(c) enter into a contract with the service provider to whom a critical service and system is outsourced that is appropriate for the materiality and nature of the outsourced activities and that provides for adequate termination procedures;

(d) maintain access to the books and records of the service providers relating to the outsourced activities;

(e) ensure that the Commission has the same access to all data, information and systems maintained by the service provider on behalf of the clearing agency that it would have absent the outsourcing arrangements;

(f) ensure that all persons conducting audits or independent reviews of the clearing agency under this Rule have appropriate access to all data, information and systems maintained by the service provider on behalf of the clearing agency that such persons would have absent the outsourcing arrangements,

(g) take appropriate measures to determine that the service provider to which a critical service or system is outsourced establishes, maintains and periodically tests an appropriate business continuity plan, including a disaster recovery plan;

(h) take appropriate measures to ensure that the service providers protect the participants' confidential information and disclose it only in circumstances where legislation or an order of a court or tribunal of competent jurisdiction requires the disclosure of such information; and

(i) establish, implement, maintain and enforce written policies and procedures to regularly review the performance of the service provider under the outsourcing arrangements.

Access, participation and due process requirements

– ***General principle***

3.18 (1) A recognized clearing agency must have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access to its services, including by direct and, where relevant, indirect participants and other clearing agencies, payment systems and trade repositories.

– ***Basic access standards***

(2) A recognized clearing agency must establish written risk-related participation requirements for granting access to each of its services that are justified in terms of the safety and efficiency of the clearing agency, are tailored to and commensurate with its specific risks, and are publicly disclosed on its Website.

(3) Without limiting subsection (2), a recognized clearing agency must not,

(a) unreasonably prohibit, condition or limit access by a person or company to the services offered by it;

(b) permit unreasonable discrimination among its participants or the customers of its participants;

(c) impose any burden on competition that is not reasonably necessary and appropriate;

(d) unreasonably require the use or purchase of another service for a person or company to utilize the clearing agency's services offered by it; and

(e) impose fees and other material costs on its participants that are unfairly and inequitably allocated among the participants.

– ***Due process***

(4) For any decision made by a recognized clearing agency that adversely affects a participant or an applicant that applies to become a participant the clearing agency must ensure that,

(a) the participant or applicant is given an opportunity to be heard or make representations; and

(b) it keeps records of, gives reasons for, and provides for reviews of its decisions, including, for each applicant that applies to become a participant, the reasons for granting access or for denying or limiting access to the applicant, as the case may be.

(5) Nothing in subsection (4) shall be construed as to limit or prevent the clearing agency from taking timely action in accordance with its rules and procedures to manage the default of one or more participants or in connection with the clearing agency's recovery or orderly wind-down, whether or not such action adversely affects a participant.

– ***Participant monitoring***

(6) A recognized clearing agency must monitor compliance by its participants with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for sanctioning non-compliance with its participation requirements, including the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.

Tiered participation arrangements

– ***General principles***

3.19 (1) A recognized clearing agency must,

(a) identify, monitor, and manage the material risks to the clearing agency arising from any tiered participation arrangements; and

(b) regularly review such risks and take mitigating action when appropriate.

– ***Gathering and assessing information on risks arising from tiered participation arrangements***

(2) A recognized clearing agency must 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 clearing agency arising from such tiered participation arrangements.

– ***Understanding material dependencies in tiered participation arrangements***

(3) Without limiting subsection (1), a recognized clearing agency must identify material dependencies between direct and indirect participants that may adversely affect the clearing agency and, in particular, have policies and procedures that enable it to identify indirect participants,

(a) who are responsible for a significant proportion of transactions processed by the clearing agency, or

(b) whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the clearing agency.

Links with other financial market infrastructures

– ***General principle***

3.20 (1) A recognized clearing agency that establishes a link with one or more clearing agencies or trade repositories must identify, monitor, and manage link-related risks.

– ***Identifying and managing link-related arrangements***

(2) Without limiting subsection (1), the clearing agency must identify and assess all potential sources of risk arising from a potential link before it enters into the link and, if it enters into the link, must identify, monitor, and manage such risks on an ongoing basis.

(3) A link described in subsection (1) must,

(a) have a well-founded legal basis that supports its design and provides adequate protection to the parties involved in the link, and

(b) be designed to enable the clearing agency to comply with this Rule.

– ***CSD-CSD links***

(4) A recognized clearing agency that acts as a central securities depository must meet the following relevant standards applicable to links it has entered into with one or more other central securities depositories:

(a) Linked central securities depositories measure, monitor, and manage the credit and liquidity risks arising from each other;

(b) Any credit extensions between linked central securities depositories are covered fully with high-quality collateral and are subject to limits;

(c) Provisional transfers of securities between linked central securities depositories are prohibited or, at a minimum, the retransfer of provisionally transferred securities are prohibited prior to the transfer becoming final;

(d) An investor central securities depository only establishes a link with an issuer central securities depository if the link provides a high level of protection for the rights of the investor central securities depository's participants;

(e) An investor central securities depository that uses an intermediary to operate a link with an issuer central securities depository measures, monitors, and manages the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary.

– ***CCP-CCP links***

(5) A recognized clearing agency that acts as a central counterparty must meet the following relevant standards applicable to links it has entered into with one or more other central counterparties:

(a) Before entering into a link with another central counterparty, a central counterparty identifies and assesses the potential spill-over effects from the default of the linked central counterparty;

(b) After entering into a link with another central counterparty, a central counterparty identifies, assesses, and manages the potential spill-over effects from the default of the linked central counterparty;

(c) If a link has three or more central counterparties, each central counterparty identifies, assesses, and manages the risks of the collective link;

(d) Each central counterparty in a central counterparty link is able to cover, at least on a daily basis, its current and potential future exposures to the linked central counterparty and its participants, if any, fully with a high degree of confidence without reducing the central counterparty's ability to fulfill its obligations to its own participants at any time.

Efficiency and effectiveness

– ***General principle***

3.21 (1) A recognized clearing agency must be efficient and effective in meeting the requirements of its participants and the markets it serves.

– ***Presumption***

(2) For the purposes of subsection (1), the clearing agency establishes that it is operating efficiently and effectively if it demonstrates that it,

(a) meets the needs of its participants and the markets it serves, in particular, with regard to:

(i) choice of a clearing and settlement arrangement;

(ii) operating structure;

(iii) scope of products cleared, settled, or recorded; and

(iv) use of technology and procedures;

(b) has clearly defined goals and objectives that are measurable and achievable including minimum service levels, risk-management expectations, and business priorities, and

(c) has mechanisms for the regular review of its efficiency and effectiveness.

Communication procedures and standards

– ***General principle***

3.22 (1) A recognized clearing agency must use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient clearing, settlement, depository, recording and payment processes.

– ***Systems that translate or convert data***

(2) Where a recognized clearing agency does not itself use internationally accepted communication standards, it must accommodate systems that translate or convert data from international standards into the domestic equivalent and vice versa.

Transparency

– ***General principles***

3.23 (1) A recognized clearing agency must have clear and comprehensive rules and procedures that are fully disclosed to participants and provide sufficient additional information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the clearing agency.

(2) All relevant rules and key procedures of the clearing agency must be publicly disclosed on its Website.

– ***Understanding risks***

(3) Without limiting subsection (1), a recognized clearing agency must disclose to its participants the following in order that they can assess the risks they would incur by participating in the clearing agency:

(a) the clearing agency's systems' design and operations; and

(b) the rights and obligations of the clearing agency and its participants.

(4) Without limiting subsection (1), a recognized clearing agency must provide all necessary and appropriate documentation and training to facilitate participants' understanding of the clearing agency's rules and procedures and the risks they face from participating in the clearing agency.

– ***Changes to rules and procedures***

(5) A recognized clearing agency must have a clear and fully disclosed process for proposing and implementing changes to its rules and procedures and for informing participants and the Commission of these changes.

– ***Disclosure of fees***

(6) A recognized clearing agency must publicly disclose on its Website its fees at the level of individual services it offers as well as its policies on any available discounts.

(7) The clearing agency must also provide clear descriptions of priced services for comparability purposes.

– ***Disclosure framework and basic data***

(8) A recognized clearing agency must complete regularly and disclose publicly on its Website responses to the CPSS-IOSCO FMI Disclosure Framework Document.

(9) The clearing agency must also, at a minimum, publicly disclose on its Website basic data on transaction volumes and values.

PART 4
EXEMPTIONS

Exemption

4.1 A Director may grant an exemption to this Rule, in whole or in part, subject to such conditions or restrictions as may be imposed in the exemption.

PART 5
EFFECTIVE DATES AND TRANSITION

Effective date

5.1 (1) Except as provided in subsections (2) to (5), this Rule comes into force on June 30, 2014.

(2) Sections 3.4 to 3.7 come into force on March 31, 2015.

(3) Section 3.14 comes into force on the later of,

(a) the day on which this Rule comes into force in accordance with subsection (1), and

(b) the day on which [Rule 91-xxx *Model Provincial Rule – Derivatives – Customer Clearing: Protection of Customer Assets*] comes into force.

(4) Paragraphs 3.3(3)(b), (c) and (d) and paragraph 3.15(3)(a) come into force on January 1, 2016.

(5) Subparagraph 3.17(12)(c)(i) and section 3.19 come into force on June 30, 2015.

FORM 24-503F1
OSC RULE 24-503 – *CLEARING AGENCY REQUIREMENTS*

CLEARING AGENCY SUBMISSION TO JURISDICTION AND
APPOINTMENT OF AGENT FOR SERVICE OF PROCESS

1. Name of clearing agency (the “Clearing Agency”):

   ____

2. Jurisdiction of incorporation, or equivalent, of Clearing Agency:

   ____

3. Address of principal place of business of Clearing Agency:

   ____

4. Name of the agent for service of process for the Clearing Agency (the “Agent”):

   ____

5. Address of Agent for service of process in Ontario:

   ____

6. The Ontario Securities Commission ("Commission") issued an order recognizing the Clearing Agency as a clearing agency pursuant to subsection 21.2(0.1) of the *Securities Act* (Ontario) ("Act") or the Commission issued an order pursuant to section 147 of the Act exempting the Clearing Agency from the requirement to be recognized as a clearing agency pursuant to subsection 21.2(0.1) of the Act on ____________________.

7. The Clearing Agency designates and appoints the Agent as its agent upon whom may be served a notice, pleading, subpoena, summons or other process in any action, investigation or administrative, criminal, quasi-criminal, penal or other proceeding arising out of or relating to or concerning the activities of the Clearing Agency in Ontario. The Clearing Agency hereby irrevocably waives any right to challenge service upon its Agent as not binding upon the Clearing Agency.

8. The Clearing Agency agrees to unconditionally and irrevocably attorn to the non-exclusive jurisdiction of (i) the courts and administrative tribunals of Ontario and (ii) any proceeding in any province or territory arising out of, related to, concerning or in any other manner connected with the regulation and oversight of the activities of the Clearing Agency in Ontario.

9. The Clearing Agency shall file a new submission to jurisdiction and appointment of agent for service of process in this form at least 30 days before the Clearing Agency ceases to be recognized or exempted by the Commission, to be in effect for six years from the date it ceases to be recognized or exempted unless otherwise amended in accordance with section 9.

10. Until six years after it has ceased to be recognized or exempted by the Commission, the Clearing Agency shall file an amended submission to jurisdiction and appointment of agent for service of process at least 30 days before any change in the name or above address of the Agent.

11. This submission to jurisdiction and appointment of agent for service of process shall be governed by and construed in accordance with the laws of Ontario.

Dated: ________________________________

____
Signature of the Clearing Agency

____
Print name and title of signing
officer of the Clearing Agency

AGENT

CONSENT TO ACT AS AGENT FOR SERVICE

I, ____________________ (name of Agent in full; if Corporation, full Corporate name) of ______________________________ (business address), hereby accept the appointment as agent for service of process of ________________________________ (insert name of Clearing Agency) and hereby consent to act as agent for service pursuant to the terms of the appointment executed by ___________________________ (insert name of Clearing Agency) on __________________ (insert date).

Dated: ________________________________

____
Signature of Agent

____
Print name of person signing and, if Agent is not an individual, the title of the person

FORM 24-503F2
OSC RULE 24-503 – *CLEARING AGENCY REQUIREMENTS*

CESSATION OF OPERATIONS REPORT FOR CLEARING AGENCY

1. Identification:

   A. Full name of the recognized or exempted clearing agency:

   B. Name(s) under which business is conducted, if different from item 1A:

2. Date clearing agency proposes to cease carrying on business as a clearing agency:

3. If cessation of business was involuntary, date clearing agency has ceased to carry on business as a clearing agency:

Exhibits

File all Exhibits with the Cessation of Operations Report. For each exhibit, include the name of the clearing agency, the date of filing of the exhibit and the date as of which the information is accurate (if different from the date of the filing). If any Exhibit required is inapplicable, a statement to that effect shall be furnished instead of such Exhibit.

Exhibit A

The reasons for the clearing agency ceasing to carry on business as a clearing agency.

Exhibit B

A list of all participants in Ontario during the last 30 days prior to ceasing business as a clearing agency.

Exhibit C

A description of the alternative arrangements available to participants in respect of the services offered by the clearing agency immediately prior to the cessation of business as a clearing agency.

Exhibit D

A description of all links the clearing agency had immediately prior to the cessation of business as a clearing agency with other clearing agencies or trade repositories, within the meaning of section 3.20 of OSC Rule 24-503 *Clearing Agency Requirements*.

CERTIFICATE OF CLEARING AGENCY

The undersigned certifies that the information given in this report is true and correct.

DATED at ____________ this ____________ day of ____________________, 20 _____

____
(Name of clearing agency)

____
(Name of director, officer or partner – please type or print)

____
(Signature of director, officer or partner)

____
(Official capacity – please type or print)

COMPANION POLICY
TO
OSC RULE 24-503
CLEARING AGENCY REQUIREMENTS

TABLE OF CONTENTS

PART I
GENERAL COMMENTS

Introduction

1.1 (1) This Companion Policy ("CP") provides explanatory guidance, and sets out the views of the Ontario Securities Commission (the "OSC", "Commission", or "we") on various matters relating to OSC Rule 24-503 *Clearing Agency Requirements* (the "Rule") and related securities legislation.

(2) Except for Part 1, the numbering of Parts, sections and subsections in this CP generally corresponds to the numbering in the Rule. Any guidance for a Part appears immediately after the Part's name. Specific guidance on a section or subsection in the Rule follows any general guidance. If there is no guidance for a Part, section or subsection, the numbering in this CP will skip to the next provision that does have guidance. Parts 2 and 3 each contain introductory comments on the guidance provided in the Part (see sections 2.0 and 3.0). Part 3 also contains supplemental guidance in text boxes, which has been jointly developed by the Canadian authorities.

(3) Unless otherwise stated, any reference to a Part, section, subsection, paragraph or definition in this CP is a reference to the corresponding Part, section, subsection, paragraph or definition in the Rule.

Background

1.2 (1) Section 21.2 of the *Securities Act* (Ontario), as amended (the "Act"), prohibits clearing agencies from carrying on business in Ontario unless they are recognized by the Commission as a clearing agency or are exempt from the requirement to be recognized by order of the Commission.

(2) The Rule sets out certain requirements in connection with the application process for recognition as a clearing agency or exemption from the recognition requirement. Guidance on the OSC's regulatory approach to such an application is set out in this CP. The Rule also sets out on-going requirements for recognized clearing agencies, which are largely based on international standards developed jointly by the Committee on Payment and Settlement Systems of the Bank for International Settlements and the Board of the International Organization of Securities Commissions ("CPSS-IOSCO Principles") that apply to financial market infrastructures ("FMIs").[1]

(3) The CPSS-IOSCO Principles are international minimum standards for systemically important payment systems ("PSs"), central securities depositories ("CSDs"), securities settlement systems ("SSSs"), central counterparties ("CCPs") and trade repositories ("TRs"), collectively identified as FMIs. The CPSS-IOSCO Principles harmonize and, where appropriate, strengthen previous international standards for FMIs.[2] Part 3 of the Rule incorporates those principles that are relevant to entities that meet the definition of a "clearing agency" in section 1(1) of the Act and that act as, or perform the services of, a CCP, CSD and SSS.

Definitions and Interpretation

1.3 (1) Unless otherwise defined in subsection 1.3(3) of this CP, the terms in this CP have the meaning given to them in the Rule or Ontario securities law, including, for greater certainty, in National Instrument 14-101 *Definitions* and OSC Rule 14-501 *Definitions*.

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1 See the CPSS-IOSCO *Principles for Financial Market Infrastructures* Report, published in April 2012, available on the Bank for International Settlements' website (www.bis.org) and the IOSCO website (www.iosco.org).

2 See the (i) 2001 CPSS report *Core principles for systemically important payment systems*, (ii) 2001 CPSS-IOSCO report *Recommendations for securities settlement systems* (together with the 2002 CPSS-IOSCO report *Assessment methodology for Recommendations for securities settlement systems*); and (iii) 2004 CPSS-IOSCO report *Recommendations for central counterparties*. All of these reports are available on the Bank for International Settlements' website (www.bis.org). The CPSS-IOSCO reports are also available on IOSCO website (www.iosco.org).

(2) With respect to the terms defined in section 1.1 of the Rule, for greater clarity,

(a) the purpose of a "concentration limit" is to help avoid concentrated holdings of certain collateral assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects;

(b) a "haircut", when used in relation to collateral received by a clearing agency to manage credit risk, is used by a clearing agency to protect itself from losses resulting from declines in the market value of the collateral in the event that the clearing agency needs to liquidate the collateral.

(3) In this CP,

"Canadian authorities" means the Bank of Canada and applicable Canadian securities regulatory authorities that have regulatory authority over clearing agencies;

"CPSS" means the Committee on Payment and Settlement Systems of the Bank for International Settlements;

"FMI" means a financial market infrastructure, which the PFMI Report describes as follows: PSs, CSDs, SSSs, CCPs and TRs;

"IOSCO" means the Board of the International Organization of Securities Commissions;

"PFMI Report" means the April 2012 Report *Principles for financial market infrastructures* published by the CPSS and IOSCO, which contains the CPSS-IOSCO Principles;

"principle" means, unless the context otherwise indicates, a principle forming part of the CPSS-IOSCO Principles, as set out in the PFMI Report.

Application

1.4 (1) Subsection 1.4(1) of the Rule specifies that Part 3 of the Rule applies, unless the context otherwise indicates, to a clearing agency that acts as, or performs the services of, any of a CCP, CSD or SSS. The term "clearing agency" is defined in subsection 1(1) of the Act. It has two separate definitions: paragraph (a) applies to a clearing agency for the securities markets; paragraph (b) applies to a clearing agency for the derivatives markets. A securities clearing agency can be a CCP, CSD or SSS. A derivatives clearing agency is typically only a CCP. The terms CCP, CSD and SSS are defined in section 1.1 of the Rule. PSs and TRs are not clearing agencies and therefore are not covered by the Rule.

The Commission notes that, while Part 3 applies only to a recognized clearing agency that acts as, or performs the services of, a CCP, CSD or SSS, the definition of a clearing agency for securities in the Act is broad, and may incorporate certain functions that are not necessarily those of a CCP, CSD or SSS. For example, an entity that provides centralized facilities for comparing data respecting the terms of settlement of a trade or transaction would be considered a clearing agency for securities, but would not be considered a CCP, CSD or SSS. Such an entity would still be required to apply for recognition as a clearing agency under section 21.2 of the Act, or apply for an exemption from the requirement to be recognized as a clearing agency pursuant to section 147 of the Act. Whether applying for recognition or an exemption, the entity would be subject to Part 2 of the Rule, but Part 3 would not apply to the entity. See Part 2 of this CP.

(2) A clearing agency that acts as a CCP for the clearing and settlement of trades in derivatives may also be subject to [Rule 91-*** *Model Provincial Rule – Derivatives – Customer Clearing: Protection of Customer Assets*]. Subsection 1.4(2) of the Rule addresses any conflict or inconsistency between [Rule 91-***] and this Rule. The term derivative is defined broadly in s. 1(1) of the Act, but excludes commodity futures contracts or commodity futures options as defined in subsection 1 (1) of the *Commodity Futures Act*, as well as contracts or instruments that, by reason of an order of the Commission, are not derivatives or contracts or instruments in a class of contracts or instruments prescribed by the regulations under the Act not to be derivatives.

PART 2
CLEARING AGENCY RECOGNITION
OR EXEMPTION FROM RECOGNITION

Regulatory Framework for Recognition or Exemption of Clearing Agencies

2.0 (1) Part 2 of the Rule governs the application process for recognition of a clearing agency that seeks to carry on business in Ontario, or for an exemption from the recognition requirement.

– ***Recognition of a Clearing Agency***

(2) A clearing agency that seeks to operate in Ontario is required to either apply for recognition under subsection 21.2(0.1) of the Act or to apply for an exemption under section 147 of the Act. Generally, the Commission takes the view that a clearing agency that is systemically important to the Ontario capital markets, or that is not subject to regulation by another regulatory body, should be recognized. Recognition by the Commission means that the clearing agency would be subject to Part 3 of the Rule, where the clearing agency acts as, or performs any of the services of, a CCP, CSD or SSS. See also subsection 1.4(1) of this CP.

(3) For the purposes of the Rule and this CP, the Commission may consider the systemic importance of a clearing agency to the Ontario capital markets based on the following list of guiding factors: value and volume of transactions processed, cleared and settled by the clearing agency, risk exposures of the clearing agency to its participants, complexity of the clearing agency, and centrality of the clearing agency with respect to its role in the market, its substitutability, and its relationships, interdependencies and interactions.

(4) In respect of the value and volume of transactions processed, cleared or settled by an applicant, the Commission may consider the current aggregate monetary values and volumes of such transactions, as well as the entity's potential for growth. Risk exposures, both credit and liquidity-related, may also be considered. In addition, the Commission may look to the nature and complexity of the clearing agency, taking into account an analysis of the various products it processes, clears or settles. Finally, the Commission may assess the centrality or importance of the clearing agency to the particular market or markets it serves, based on the degree to which it critically supports, or that its failure or disruption would affect, such markets.

(5) No single factor described above will be determinative in an assessment of systemic importance. Further, the list of guiding factors is non-exhaustive. The Commission retains the ability to consider additional quantitative and qualitative factors as may be relevant and appropriate. Additional factors may be based on the characteristics of the clearing agency under review, such as the nature of its operations, its corporate structure, or its business model.

– ***Exemption from Recognition***

(6) Depending on the circumstances, the Commission may grant a clearing agency an exemption from recognition subject to appropriate terms and conditions pursuant to section 147 of the Act, where it is not considered systemically important or where it does not otherwise pose significant risk to the Ontario capital markets. For example, the Commission may consider this approach for an entity that provides limited services or facilities, thereby not warranting full regulation, such as a clearing agency that does not perform the functions of a CCP, CSD or SSS. However, in such cases, the Commission may also impose terms and conditions that would generally be analogous to certain requirements found in Part 3 of the Rule. In addition, a clearing agency based outside of Ontario that is carrying on business or intends to carry on business in the province would generally be required to apply either for recognition or for an exemption from recognition.[3] We recognize, however, that such clearing agency may already be subject to a regulatory regime in its home jurisdiction. Accordingly, full regulation may be duplicative and inefficient when imposed in addition to the regulation of the home jurisdiction. The Commission may therefore grant the clearing agency an exemption from the recognition requirement. In almost all cases, the exemption will be subject to certain terms and conditions, including reporting requirements. Where the regulatory regime of the clearing agency's home jurisdiction is not comparable to that of Ontario, the Commission may also consider it necessary to impose additional requirements.

Application and Initial Filing of Information

2.1 The application process for both recognition and exemption from recognition as a clearing agency is similar. The entity that applies to be a recognized or exempted clearing agency will typically be the entity that operates the facility or performs the functions of a clearing agency, as defined in section 1(1) of the Act. Where an applicant owns and operates more than one facility or performs more than one function (e.g. of CCP, CSD and SSS), it may choose to file one set of application materials to cover all of the facilities or functions, or it may file separate application materials in respect of each facility or function.

An application for recognition of a clearing agency pursuant to section 21.2 of the Act, or for an exemption from the requirement, will require completion of appropriate documentation. This will include an application package consisting of the applicant's most recently completed CPSS-IOSCO FMI Disclosure Framework Document,[4] and any additional information which demonstrates that it is in the public interest for the Commission to recognize or exempt the applicant as a clearing agency under the Act. Together, the application materials should present a detailed description of the history, regulatory structure (if any), and business operations of the clearing agency. A clearing agency that acts as, or performs the service of, a CCP, CSD or SSS will

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3 A clearing agency that offers to provide its services or facilities to a person or company resident in Ontario would be considered to be carrying on business in Ontario.

4 The CPSS-IOSCO FMI Disclosure Framework Document, as defined in s. 1.1 of the Rule, entails the *FMI Disclosure Template* found in Annex A of the *Principles for Financial Market Infrastructures; Disclosure framework and Assessment methodology*, published in December 2012. It is available on the Bank for International Settlements' website (www.bis.org) and the IOSCO website (www.iosco.org).

need to describe how it meets or will meet the requirements of Part 3 of the Rule, or, if the applicant has its head office or principal place of business located outside of Ontario, how the clearing agency meets or will meet requirements that are substantively similar to those in Part 3 of the Rule. An applicant located outside of Ontario should also provide a detailed description of the regulatory regime of the home jurisdiction and the regulatory requirements imposed on the clearing agency in its home jurisdiction, along with the certification and opinion of legal counsel required under subsection 2.1(2) of the Rule.

Where specific information items of the CPSS-IOSCO FMI Disclosure Framework Document are not relevant to an applicant because of the nature or scope of its clearing agency activities, its structure, the products it clears or settles, or its regulatory environment, the application should explain in reasonable detail why the information items are not relevant. This may be especially the case for a clearing agency that does not perform any of the functions or services of a CCP, CSD or SSS.

The application package filed by an applicant under the Rule will generally be kept confidential in accordance with Ontario securities law. The OSC may, if it considers that it is in the public interest to do so, require the applicant to publicly disclose a summary of the information contained in its application materials. We note that the clearing agency is required to publicly disclose its responses to the CPSS-IOSCO FMI Disclosure Framework Document. See subsection 3.23(8) of the Rule.

Significant Changes and Other Changes in Information

2.2 (2) Under subsection 2.2(2) of the Rule, a recognized clearing agency must receive prior written approval for implementing a "significant change", as defined in the subsection, except as otherwise provided in the "notice and approval protocol".[5] The procedures for notifying the Commission of a significant change and for the Commission's review, approval and publication of the significant change, will be set out in the notice and approval protocol, a term defined in subsection 2.2(1) of the Rule.

(4) The OSC generally considers a change in a recognized clearing agency's fees or fee structure to be a significant change. However, the OSC recognizes that a recognized clearing agency may frequently change their fees or fee structure and may need to implement fee changes within tight timeframes. To facilitate this process, subsection 2.2(4) of the Rule provides that a recognized clearing agency may provide information that describes the change in fees or fee structure in a shorter timeframe (at least 30 days before the expected implementation date of the change in fees or fee structure).

Ceasing to Carry on Business

2.3 A recognized or exempt clearing agency that intends to cease carrying on business in Ontario as a clearing agency, either voluntarily or involuntarily, must file a completed Form 24-503F2 *Ceasing to Carry on Business* within the appropriate timelines.

A recognized clearing agency intending to cease carrying on business in Ontario should also make an application to voluntarily surrender its recognition to the Commission pursuant to section 21.4 of the Act. The Commission may accept the voluntary surrender subject to terms and conditions.

Legal Entity Identifiers

2.6 (1) Section 2.6 of the Rule requires that a clearing agency that applies to be recognized or exempted from the recognition requirement possess and utilize a legal entity identifier ("LEI") for the purposes of any recordkeeping and reporting requirements required under Ontario securities law. It is envisioned that this identifier be a LEI under the Global LEI System. The Global LEI System is a G20 endorsed initiative[6] that will uniquely identify parties to transactions. It is currently being designed and implemented under the direction of the LEI Regulatory Oversight Committee ("ROC"), a governance body endorsed by the G20.

(2) The "Global Legal Entity Identifier System" referred to in subsection 2.6(2) and paragraph 2.6(4)(a) of the Rule is a G20 endorsed system that will serve as a public-good utility responsible for overseeing the issuance of legal entity identifiers globally to counterparties who enter into transactions.

(3) If the Global LEI System is not available at the time a clearing agency is required to fulfill their recordkeeping or reporting requirements under Ontario securities law, they must use a substitute legal entity identifier. The substitute legal entity identifier must be in accordance with the standards established by the LEI ROC for pre-LEI identifiers. At the time the Global LEI System is operational, a clearing agency or its affiliates must cease using their substitute LEI and commence using their LEI. It is conceivable that the two identifiers could be identical.

[5] The recognition order can also relieve the clearing agency from some of the requirements to seek prior approval for the implementation of a significant change.

[6] See http://www.financialstabilityboard.org/list/fsb_publications/tid_156/index.htm for more information.

PART 3
ON-GOING REQUIREMENTS APPLICABLE TO RECOGNIZED CLEARING AGENCIES

Introduction

3.0 (1) Part 3 of the Rule contains on-going requirements applicable to recognized clearing agencies. The requirements are primarily derived from the international minimum standards applicable to FMIs set out in the PFMI Report. Those principles that are relevant to clearing agencies that act as, or perform the services of, a CCP, CSD or SSS are adapted here to the Ontario context.

– ***General drafting and interpretive approaches to Part 3 of the Rule and CP***

(2) Unless the context otherwise requires, the provisions of Part 3 of the Rule are intended to be interpreted in a manner consistent with the relevant headline principles in the PFMI Report, each principle's key considerations, and the related explanatory notes. In this regard, and unless otherwise specified, Part 3 of the Rule should be read in concert with the PFMI Report. For provisions in the Rule that are not based on the PFMI Report, additional guidance is provided in a relevant subsection of this CP. Moreover, where the Canadian authorities have jointly developed supplementary guidance in order to provide additional discussion and clarity on certain aspects of these new standards in the Canadian context that are not dealt with in the PFMI Report, such supplementary guidance is inserted in a separate text box in this CP, to highlight its importance.

The following sections in Part 3 of the Rule generally correspond to the following CPSS-IOSCO Principles:

Relevant Section of the Clearing Rule	Principle in the PFMI Report
3.1 – Legal framework	Principle 1: Legal basis
3.2 – Governance	Principle 2: Governance
3.3 – Framework for comprehensive management of risks	Principle 3: Framework for comprehensive management of risks
3.4 – Credit risk	Principle 4: Credit risk
3.5 – Collateral	Principle 5: Collateral
3.6 – Margin	Principle 6: Margin
3.7 – Liquidity risk	Principle 7: Liquidity Risk
3.8 – Settlement finality	Principle 8: Settlement finality
3.9 – Money settlements	Principle 9: Money settlements
3.10 – Physical deliveries	Principle 10: Physical deliveries
3.11 – Central securities depositories	Principle 11: Central securities depositories
3.12 – Exchange-of-value settlement systems	Principle 12: Exchange-of-value-settlement systems
3.13 – Participant default rules and procedures	Principle 13: Participant-default rules and procedures
3.14 – Segregation and portability	Principle 14: Segregation and portability
3.15 – General business risk	Principle 15: General business risk
3.16 – Custody and investment risks	Principle 16: Custody and investment risks
3.17 – Operational risks	Principle 17: Operational risks
3.18 – Access, participation requirements and due process	Principle 18: Access and participation arrangements
3.19 – Tiered participation arrangements	Principle 19: Tiered participation arrangements
3.20 – Links with other financial market infrastructures	Principle 20: FMI links
3.21 – Efficiency and effectiveness	Principle 21: Efficiency and effectiveness
3.22 – Communication procedures and standards	Principle 22: Communication procedures and standards
3.23 – Transparency	Principle 23: Disclosure of rules, key procedures, and market data

In each section of Part 3 of the Rule, one or more subsections set forth a high-level principle applicable to a recognized clearing agency that generally correspond to the relevant headline principle in the PFMI Report. Most sections include additional subsections that are intended to set forth, without limiting the general principle in each section, certain detailed aspects of the general principle that correspond to a key consideration in the PFMI Report. In certain other cases, additional subsections set out one or more specific requirements that are related to the general principle or address a matter of a similar nature.

Most of the explanatory notes from the PFMI Report are incorporated in the CP. The explanatory notes discuss each principle's objective and rationale, and provide guidance on how a standard can be implemented. As noted above, supplementary guidance from the Canadian authorities is also included in text boxes in this CP.

Legal Framework

– ***General principle***

3.1 (1) A clearing agency should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities. Subsection 3.1(1) of the Rule requires a recognized clearing agency to establish, implement, maintain and enforce appropriate policies and procedures to achieve this legal basis. A robust legal basis for a clearing agency's activities is critical to its overall soundness. The legal basis defines, or provides the foundation for relevant parties to define, the rights and obligations of the clearing agency, its participants, and other relevant parties, such as its participants' customers, custodians, settlement banks, and service providers. Most risk-management mechanisms are based on assumptions about the manner and time at which these rights and obligations arise through the clearing agency. Therefore, if risk management is to be sound and effective, the enforceability of rights and obligations relating to the clearing agency and its risk management should be established with a high degree of certainty. If the legal basis for the clearing agency's activities and operations is inadequate, uncertain, or opaque, then the clearing agency, its participants, and their customers may face unintended, uncertain, or unmanageable credit or liquidity risks, which may also create or amplify systemic risks.

The legal basis consists of the legal framework and the clearing agency's rules, procedures, and contracts. The legal framework includes general laws and regulations that govern, among other things, property, contracts, insolvency, corporations, securities, banking, secured interests, and liability. In some cases, the legal framework that governs competition and consumer and investor protection may also be relevant. Laws and regulations specific to the clearing agency's activities include those governing its authorization and its regulation, supervision, and oversight; rights and interests in financial instruments; settlement finality; netting; immobilization and dematerialization of securities; arrangements for exchange of value settlement systems; collateral arrangements (including margin arrangements); default procedures; and the resolution of the clearing agency. The clearing agency should establish rules, procedures, and contracts that are clear, understandable, and consistent with the legal framework and provide a high degree of legal certainty. The clearing agency also should consider whether the rights and obligations of the clearing agency, its participants, and as appropriate, other parties, as set forth in its rules, procedures, and contracts are consistent with relevant industry standards and market protocols.

– ***Comprehensive and enforceable rules***

(2) Subsection 3.1(2) of the Rule articulates the requirement that the clearing agency's rules, procedures and related contracts be clear and comprehensive.

(a) The requirement under paragraph 3.1(2)(a) of the Rule includes explanatory material that should be written in plain language such that participants (and where relevant, participants' customers) can fully understand the system's design and operations, their rights and obligations, and the risks, fees and other material costs of participating in the system.

(d) The rules, procedures and related contracts must also be enforceable in Ontario. In particular, the legal basis should support the enforceability of the participant-default rules and procedures that the clearing agency uses to handle a defaulting or insolvent participant, especially any transfers and close-outs of a direct or indirect participant's assets or positions.

(e) Paragraph 3.1(2)(e) of the Rule requires the rules, procedures and related contracts of the clearing agency provide a reasonable degree of certainty that any actions taken under such rules and procedures will not be voided, reversed, or subject to stays. For example, ambiguity about the enforceability of procedures that facilitate the implementation of the clearing agency's plans for recovery, orderly wind-down, or resolution could delay and possibly prevent it or the relevant authorities from taking appropriate actions and hence increase the risk of a disruption to its critical services or a disorderly wind-down. In the case that the clearing agency is being wound down or resolved, the legal basis should support decisions or actions concerning termination, close-out netting, the transfer of cash and securities positions of the clearing agency, or the transfer of all or parts of the rights and obligations provided in a link arrangement to a new entity.

– *Articulating legal basis*

(3) The clearing agency 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. One recommended approach to articulating the legal basis for each material aspect of the clearing agency's activities is to obtain well-reasoned and independent legal opinions or analyses. A legal opinion or analysis should, to the extent practicable, confirm the enforceability of the clearing agency's rules and procedures and must provide reasoned support for its conclusions. The clearing agency should consider sharing these legal opinions and analyses with its participants in an effort to promote confidence among participants and transparency in the system. In addition, the clearing agency should seek to ensure that its activities are consistent with the legal basis in all relevant jurisdictions. These jurisdictions could include (a) those where the clearing agency is conducting business (including through linked clearing agencies); (b) those where its participants are incorporated, located, or otherwise conducting business for the purposes of participation; (c) those where collateral is located or held; and (d) those indicated in relevant contracts.

– *Conflict-of-laws issues*

(4) Legal risk due to conflict of laws may arise if the clearing agency is, or may reasonably 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, under subsection 3.1(4) of the Rule, the clearing agency is required to identify and analyze potential conflict-of-laws issues and ensure its policies and procedures are designed to mitigate risk. For example, the rules governing its activities should clearly indicate the law that is intended to apply to each aspect of the clearing agency's operations. The clearing agency and its participants should be aware of applicable constraints on their abilities to choose the law that will govern the clearing agency's activities when there is a difference in the substantive laws of the relevant jurisdictions. For example, such constraints may exist because of jurisdictions' differing laws on insolvency and irrevocability. 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 the clearing agency's choice of law in relevant jurisdictions, it should obtain reasoned and independent legal opinions and analysis in order to address properly such uncertainty.

In general, there is no substitute for a sound legal basis and full legal certainty. In some practical situations, however, full legal certainty may not be achievable. In such cases, the clearing agency should investigate steps to mitigate its legal risk through the selective use of alternative risk-management tools that do not suffer from legal uncertainty. These could include, in appropriate circumstances and if legally enforceable, participant requirements, exposure limits, collateral requirements, and prefunded default arrangements. The use of such tools may limit the clearing agency's exposure if its activities are found to be not supported by relevant laws and regulations. If such controls are insufficient or not feasible, the clearing agency could apply activity limits and, in extreme circumstances, restrict access or not perform the problematic activity until the legal situation is addressed.

Governance

– *General principle*

3.2 (1) Governance is the set of relationships between a clearing agency's owners, board of directors (or equivalent), management, and other relevant parties, including participants, authorities, and other stakeholders (such as participants' customers, other interdependent clearing agencies, and the broader market). Governance provides the processes through which an organization sets its objectives, determines the means for achieving those objectives, and monitors performance against those objectives. Good governance provides the proper incentives for clearing agency's board and management to pursue objectives that are in the interest of its stakeholders and that support relevant public interest considerations. Under subsection 3.2(1) of the Rule, a recognized clearing agency is required to establish, implement and maintain written governance arrangements that meet certain public interest policy objectives. The clearing agency should have objectives that place a high priority on the safety and efficiency of the clearing agency and explicitly support financial stability and other relevant public interest considerations. Further guidance by the Canadian authorities is given in Box 1 below.

Box 1:
Additional Joint Guidance from the Canadian Authorities –
Financial Stability and Other Public Interest Considerations

Context

This guidance was prepared by the Canadian authorities to provide additional context and clarity on certain aspects of these new standards in the Canadian context.

The PFMI Report defines governance as the set of relationships between an FMI's owners, board of directors (or equivalent), management, and other relevant parties, including participants, authorities, and other stakeholders (such as participants' customers, other interdependent FMIs, and the broader market). Governance provides the processes through which an organisation sets its objectives, determines the means for achieving those objectives, and monitors performance against those objectives. This note provides supplementary regulatory guidance for Canadian FMIs on their governance arrangements as it relates to supporting relevant public interest considerations.

Public interest considerations in the context of the PFMI Report

The PFMI Report indicates that FMIs should "explicitly support financial stability and other relevant public interests." However, there may be circumstances where providing explicit support of relevant public interests conflict with other FMI objectives and therefore require appropriate prioritization and balancing. For example, addressing the potential trade-offs between protecting the participants and the FMI while ensuring the financial stability interests are upheld.

Guidance within the PFMI Report

The following text has been extracted directly from the PFMI Report. The pertinent information is in bold.

PFMI Report, paragraph 3.2.2: **Given the importance of FMIs and the fact that their decisions can have widespread impact, affecting multiple financial institutions, markets, and jurisdictions, it is essential for each FMI to place a high priority on the safety and efficiency of its operations and explicitly support financial stability and other relevant public interests. Supporting the public interest is a broad concept that includes, for example, fostering fair and efficient markets.** For example, in certain over-the-counter derivatives markets, industry standards and market protocols have been developed to increase certainty, transparency, and stability in the market. If a CCP in such markets were to diverge from these practices, it could, in some cases, undermine the market's efforts to develop common processes to help reduce uncertainty. An FMI's governance arrangements should also include appropriate consideration of the interests of participants, participants' customers, relevant authorities, and other stakeholders. *(...)* For all types of FMIs, governance arrangements should provide for fair and open access (see Principle 18 on access and participation requirements) and for effective implementation of recovery or wind-down plans, or resolution.

PFMI Report, paragraph 3.2.8: **An FMI's board has multiple roles and responsibilities that should be clearly specified. These roles and responsibilities should include** (a) establishing clear strategic aims for the entity; (b) ensuring effective monitoring of senior management (including selecting its senior managers, setting their objectives, evaluating their performance, and, where appropriate, removing them); (c) establishing appropriate compensation policies (which should be consistent with best practices and based on long-term achievements, in particular, the safety and efficiency of the FMI); (d) establishing and overseeing the risk-management function and material risk decisions; (e) overseeing internal control functions (including ensuring independence and adequate resources); (f) ensuring compliance with all supervisory and oversight requirements; **(g) ensuring consideration of financial stability and other relevant public interests**; and (h) providing accountability to the owners, participants, and other relevant stakeholders.

The CPSS-IOSCO PFMI Disclosure framework and Assessment methodology provides questions to guide the assessment of the FMI against the PFMI Report. Questions related to public interest considerations are focused on ensuring that the FMI's objectives are clearly defined, giving a high priority to safety, financial stability and efficiency while also ensuring all other public interest considerations are identified and reflected in the FMI's objectives.

Supplementary Guidance for designated Canadian FMIs

- By definition the PFMIs apply to systemically important FMIs, so safety and financial stability objectives should be given a high priority.
- Efficiency is also a high priority that should contribute to (but not supersede) the safety and financial stability objectives.
- Other public interest considerations such as competition and fair and open access should also be considered in the broader safety and financial stability context.
- A framework (objectives, policies and procedures) should be in place for default and other emergency situations. The framework should articulate explicit principles to ensure financial stability and other relevant public interests are considered as part of the decision making process. For example, it should provide guidance on discretionary management decisions, consider the trade-offs between protecting the participants and the FMI while also ensuring the financial stability interests are upheld, and articulate a communication protocol with the board and regulators.

- Practical questions/approaches to assessing the appropriateness of the framework include:
  - Does the enabling legislation, articles of incorporation, corporate by-laws, corporate mission, vision statements, corporate risk statements/frameworks/methodology clearly articulate the objectives and are they appropriately aligned and communicated (transparent)?
  - Do the objectives give appropriate priority to safety, financial stability, efficiency and other public interest considerations?
  - Does the Board structure ensure the right mix of skills/experience and interests are in place to ensure the objectives are clear, appropriately prioritized, achieved and measured?
  - What is the training provided to the Board and management to support the objectives?
  - Do the service offerings and business plans support the objectives?
  - Do the system design, rules, procedures support the objectives?
  - Are the inter-dependencies and key dependencies considered and managed in the context of the broader financial stability objectives? For instance, do problem and default management policies and procedures appropriately provide for consideration of the broader financial stability interests and do they engage the key stakeholders and regulators?
  - Are there procedures in place to get timely engagement of the Board to discuss emerging/current issues, consider scenarios, provide guidance and make decisions?
  - Does the framework ensure that the broader financial stability issues are considered in any actions relating to a participant suspension?

– ***Board of directors and documented governance arrangements***

(2) Further to the general principle under subsection 3.2(1) of the Rule, paragraph 3.2(2)(a) of the Rule requires that the clearing agency have a board of directors. Under subparagraph 3.2(2)(b)(i) of the Rule, the clearing agency is also required to provide clear and direct lines of responsibility and accountability related to its governance arrangements, particularly between management and the board. Under subparagraph (ii), these arrangements must be publicly disclosed. Governance arrangements, which define the structure under which the board and management operate, should include certain key components such as: (i) the role and composition of the board and any board committees, (ii) senior management structure, (iii) reporting lines between management and the board, (iv) ownership structure, (v) internal governance policy, (vi) design of risk management and internal controls, (vii) procedures for the appointment of board members and senior management, and (viii) processes for ensuring performance accountability. Subparagraph 3.2(b)(iii) of the Rule requires that the roles of the clearing agency's board of directors be clearly specified. These roles and responsibilities should include: (i) establishing clear strategic aims for the entity; (ii) ensuring effective monitoring of senior management (including selecting its senior managers, setting their objectives, evaluating their performance, and, where appropriate, removing them); (iii) establishing appropriate compensation policies (which should be consistent with best practices and based on long-term achievements, in particular, the safety and efficiency of the clearing agency); (iv) establishing and overseeing the risk-management function and material risk decisions; (v) overseeing internal control functions (including ensuring independence and adequate resources); (vi) ensuring compliance with all supervisory and oversight requirements; (vii) ensuring consideration of financial stability and other relevant public interests; and (viii) providing accountability to the owners, participants, and other relevant stakeholders. Finally, subparagraph 3.2(b)(iv) of the Rule requires that the documented governance arrangements ensure sufficient independence for key functions such as risk management, internal control, and audit.

Depending on its ownership structure and organizational form, the clearing agency may need to focus particular attention on certain aspects of its governance arrangements. If the clearing agency is part of a larger organization, for example, it should place particular emphasis on the clarity of its governance arrangements, including in relation to any conflicts of interests and outsourcing issues that may arise because of the parent or other affiliated organization's structure. The clearing agency's governance arrangements should also be adequate to ensure that decisions of affiliated organizations are not detrimental to the clearing agency. If the clearing agency is, or is part of, a for-profit entity, it may need to place particular emphasis on managing any conflicts between income generation and safety. Where relevant, cross-border issues should be appropriately identified, assessed, and dealt with in the governance arrangements, both at the clearing agency level and at the level(s) of its parent entity(ies).

Where the clearing agency is part of a larger organization, additional guidance has been given by the Canadian authorities in Box 2.

Box 2:
Additional Joint Guidance from the Canadian authorities –
Vertically and Horizontally Integrated FMIs

Context

This guidance was prepared by the Canadian authorities to provide additional context and clarity on certain aspects of these new standards in the Canadian context.

Consolidation, or integration, of FMI services may bring about benefits for merging FMIs; however it may also create new governance challenges. The PFMI Report contains some general guidance regarding how FMIs should manage governance issues that arise in integrated entities. This note provides supplementary regulatory guidance for Canadian FMIs that either belong to an integrated entity or are considering consolidating with another entity to form one. The guidance applies to both vertically and horizontally integrated entities.

Vertical and horizontal integration in the context of FMIs

CPSS defines a vertically integrated FMI group as one that brings together post-trade infrastructure providers under common ownership with providers of other parts of the value chain (for example, one entity owning and operating an exchange, central counterparty (CCP) and securities settlement system (SSS)) and a horizontally integrated group as one that provides the same post-trade service offerings across a number of different products(for example, one entity offering CCP services for derivatives and cash markets).[7]

Guidance within the PFMI Report

The following text has been extracted directly from the PFMI Report. The pertinent information is in bold.

PFMI Report, paragraph 3.2.5: Depending on its ownership structure and organisational form, an FMI may need to focus particular attention on certain aspects of its governance arrangements. **An FMI that is part of a larger organisation, for example, should place particular emphasis on the clarity of its governance arrangements, including in relation to any conflicts of interests and outsourcing issues that may arise because of the parent or other affiliated organisation's structure. The FMI's governance arrangements should also be adequate to ensure that decisions of affiliated organisations are not detrimental to the FMI.[8] An FMI that is, or is part of, a for-profit entity may need to place particular emphasis on managing any conflicts between income generation and safety.**

PFMI Report, paragraph 3.2.6: An FMI may also need to focus particular attention on certain aspects of its risk-management arrangements as a result of its ownership structure or organisational form. **If an FMI provides services that present a distinct risk profile from, and potentially pose significant additional risks to, its payment, clearing, settlement, or recording function, the FMI needs to manage those additional risks adequately. This may include separating the additional services that the FMI provides from its payment, clearing, settlement, and recording function legally, or taking equivalent action.** The ownership structure and organisational form may also need to be considered in the preparation and implementation of the FMI's recovery or wind-down plans or in assessments of the FMI's resolvability.

Supplementary guidance for designated Canadian FMIs

An FMI that is part of a larger entity faces additional risk considerations compared to stand-alone FMIs. While there are potential benefits from integrating services into one large entity, including potential risk reduction benefits, integrated entities could face additional risks such as a greater degree of general business risk. Examples of how this could occur include the following:

- losses in one function may spill-over to the entity's other functions;

7 CPSS-IOSCO 2010. "Market structure developments in the clearing industry: implications for financial stability." CPSS-IOSCO Paper No 92. Available at: http://www.bis.org/publ/cpss92.htm.

8 If an FMI is wholly owned or controlled by another entity, authorities should also review the governance arrangements of that entity to see that they do not have adverse effects on the FMI's observance of this principle.

- the consolidated entity may face high combined exposures across its functions; and
- the consolidated entity may face exposures to the same participants across its functions.

For a more extensive discussion of potentially heightened risks that integrated FMIs may face, see CPSS-IOSCO, "Market structure developments in the clearing industry: implications for financial stability" (2010).

If an FMI belongs to a larger entity, or is considering consolidating with another entity, it should consider how its risk profile differs as part of the consolidated entity, and take appropriate measures to mitigate these risks.

In addition, FMIs that either belong to an integrated entity or are considering merging to form one should meet the following conditions.

1) Measures to protect critical FMI functions

- FMIs fulfill critical functions for the markets they serve. Therefore, FMI functions should be legally separated from other functions performed by the consolidated entity in order to maximize bankruptcy remoteness of the FMI functions.
- If an FMI performs multiple functions with distinct risk profiles, the operator should effectively manage the additional risks that may result. The FMI should hold sufficient financial resources to manage the risks in all services it offers, including the combined or compounded risks that would be associated with offering the services through a single legal entity. If the FMI provides multiple services, it should disclose information about the risks of the combined services to existing and prospective participants to give an accurate understanding of the risks they incur by participating in the FMI. The FMI should carefully consider the benefits of offering critical services with distinct risk profiles through separate legal entities.
- Central counterparties (CCPs) take on more risk than other FMIs, and are inherently at higher risk of failure. Therefore, the FMI must either legally separate its CCP functions from other critical (non-CCP) FMI functions, or will need to satisfy its regulators that additional risks are managed appropriately to ensure the FMI's financial and operational viability.
- Legal separation of critical functions is intended to maximize their bankruptcy remoteness and would not necessarily preclude integration of common organizational management activities such as IT and legal services across functions as long as any related risks are appropriately identified and mitigated.

2) Independence of governance and risk management

- FMIs and non-FMIs may have different corporate objectives and risk management appetites which could conflict at the parent level. For example, non-FMI functions, such as trading venues, are generally more focused on profit generation than risk management and do not have the same risk profile as FMI functions. A trading venue in a vertically integrated entity may benefit from increased participation in its service if its associated clearing function lessens its participation requirements.
- To mitigate potential conflicts, in particular the ability of other functions to negatively influence the FMI's risk controls, each FMI subsidiary should have a governance structure and risk management decision-making process that is separate and independent from the other functions and should maintain an appropriate level of autonomy from the parent and other functions to ensure efficient decision making and effective management of any potential conflicts of interest. In addition, the consolidated entity's broad governance arrangements should be reviewed to ensure they do not impede the FMI function's observance of the CPSS-IOSCO principle on governance.

3) Comprehensive management of risks

- Although risk management governance and decision-making should remain independent, it is nonetheless necessary that the consolidated entity is able to manage risk appropriately across the entity. At a consolidated level, the entity should have an appropriate risk management framework that considers the risks of each subsidiary and the additional risks related to their interdependencies.
- An FMI should identify and manage the risks it bears from and poses to other entities as a result of interdependencies. Consolidated FMIs should also identify and manage the risks they pose to one another as a result of their interdependencies. Consolidated FMIs may have exposures to the same participants, liquidity providers, and other critical service providers across products, markets and/or functions. This may increase the entity's dependence on these providers and may heighten the systemic risk associated with the consolidated entity

compared to a stand-alone FMI. Where possible, the consolidated entity and its FMIs should consider ways to mitigate risks arising from shared dependencies. The consolidated entity and its FMIs should also consider conducting entity-wide operational risk testing related to identifying and mitigating these risks.

4) Sufficient capital to cover potential losses

- Consolidated entities face the risk that a single participant defaults in more than one subsidiary simultaneously. This could result in substantial losses for the consolidated entity which will then also need to replenish resources for the FMIs to continue to operate. FMIs should consider such risks in developing their resource replenishment plan.

- Consolidated entities may face higher or lower business risk than individual FMIs depending on size, complexity and diversification across affiliates. Consolidated entities should consider these impacts in their general business risk profiles and in determining the appropriate level of liquid assets needed to cover their potential general business losses.[9]

(3) Subsection 3.2(3) of the Rule requires the clearing agency to have clear and comprehensively documented procedures for its functioning.

(a) As part of its governance procedures, the clearing agency must include those which ensure performance accountability, through the regular review of the overall performance of the board and of the performance of its individual board members and senior management, as well as, potentially, periodic independent assessments of performance.

(b) Governance procedures documenting the functioning of the board and management must also identify, address, and manage potential conflicts of interest. Conflicts of interest include, for example, circumstances in which a board member or member of management has material competing business interests with the clearing agency.

(c) Finally, the clearing agency may also need to focus particular attention on certain aspects of its risk-management arrangements as a result of its ownership structure or organizational form. Accordingly, if the clearing agency provides services that present a distinct risk profile from, and potentially pose significant additional risks to its depository, clearing and settlement functions, the clearing agency's governance procedures must address and manage those additional risks adequately. This may include legally separating the additional services that the clearing agency provides, or taking equivalent action. The ownership structure and organizational form may also need to be considered in the preparation and implementation of the clearing agency's recovery or wind-down plans or in assessments of the clearing agency's resolvability.

– ***Board member skills and composition***

(4) (a) Governance arrangements should clearly document policies for the appointment of members to its board of directors, and for its composition. Pursuant to paragraph 3.2(4)(a) of the Rule, the board must be composed of suitable members with the appropriate mix of skills (including strategic and relevant technical skills), experience and knowledge (including an understanding of the clearing agency's interconnectedness with other parts of the financial system and of relevant law) to effectively and efficiently fulfill the board's multiple roles and responsibilities. Members should also have a clear understanding of their roles in corporate governance, be able to devote sufficient time to their roles, ensure that their skills remain up-to-date, and have appropriate incentives to fulfill their roles. Members should be able to exercise objective and independent judgment. Independence from the views of management typically requires the inclusion of non-executive board members, including independent board members, as further required by paragraph 3.2(4)(b) of the Rule.

(b) Paragraph 3.2(4)(b) of the Rule requires that an appropriate number of board members be independent of the clearing agency. We generally view individuals as independent if they have no direct or indirect material relationships with the clearing agency (for example, clearing members), its officers or employees, its shareholders who hold a significant interest in the clearing agency, and those with cross-directorships. While generally also excluded, parties with significant business relationship with the clearing agency may, depending on the circumstances, also be considered independent. Members should be able to exercise objective and independent judgment after fair consideration of all relevant information and views and without undue influence from internal or external parties or interests. The clearing agency should publicly disclose which board members it regards as independent. The OSC would expect that independent members of a clearing agency would represent the public interest by ensuring that regulatory and public objectives are fulfilled and that the interests of participants are considered.

9 Liquid assets held for general business losses must be funded by equity (such as common stock, disclosed reserves, or retained earnings) rather than debt.

– ***Management roles, responsibilities and skills***

(5) (a) Paragraph 3.2(5)(a) of the Rule requires that the roles and responsibilities of the management of the clearing agency should be clearly specified and documented. The clearing agency should also have clear and direct reporting lines between its board of directors and its management, in order to promote accountability.

(i) Under subparagraph 3.2(5)(a)(i) of the Rule, management is required to be actively involved in the risk-control processes of the clearing agency, as directed by the board.

(ii) Under subparagraph 3.2(5)(a)(ii) of the Rule, management should ensure that internal controls and related procedures are appropriately designed and executed in order to promote the clearing agency's objectives. These procedures should include a sufficient level of management oversight. With board direction, management should ensure that the clearing agency's activities are consistent with its objectives, strategy, and risk tolerance, as determined by the board. Internal controls and related procedures should be subject to regular review and testing by well-trained and staffed risk-management and internal-audit functions.

(b) As with the clearing agency's board of directors, management should have the appropriate experience and mix of skills, as well as the integrity necessary to suit their roles and discharge their responsibilities for the operation and risk management of the clearing agency.

(c) Under paragraph 3.2(5)(c) of the Rule, the management of the clearing agency is required to appoint both a chief risk officer and a chief compliance officer, and to entitle them to report directly to the board of directors, unless the board determines that the chief risk officer or chief compliance officer should report to the chief executive officer of the clearing agency. These roles are further elaborated on in subsections 3.2(6) and (7) of the Rule, respectively.

The reference to "harm to the broader financial system" in subparagraph 3.2(7)(c)(ii) of the Rule may be in relation to the local or international financial system.

– ***Risk management governance***

(8) The board is ultimately responsible for managing the clearing agency's risks. Under subsection 3.2(8) of the Rule, the clearing agency is required to establish a clear, documented risk-management framework. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board. The board should also ensure that the clearing agency'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. The board should regularly monitor the clearing agency's risk profile to ensure that it is consistent with its business strategy and risk-tolerance policy. In addition, the board should ensure that the clearing agency has an effective system of controls and oversight, including adequate governance and project management processes, over the models used to quantify, aggregate, and manage its risks. Board approval should be required for material decisions that would have a significant impact on the risk profile of the entity, such as the limits for total credit exposure and large individual credit exposures. Other material decisions that may require board approval include the introduction of new products, implementation of new links, use of new crisis-management frameworks, adoption of processes and templates for reporting significant risk exposures, and adoption of processes for considering adherence to relevant market protocols.

In the over-the-counter ("OTC") derivatives markets, clearing agencies that act as a CCP are expected to adhere to practices or arrangements that have become established market conventions or to act in a manner that does not conflict with such terms, unless the CCP has reasonable grounds not to do so and that do not conflict with the market's wider interest. In this regard, where a CCP supports a market and is expected to fully adhere to market-wide protocols and related decisions, it should be involved in the development and establishment of such standards. It is critical that market governance processes fully reflect the role of the CCP in the market. The arrangements adopted by a CCP should be transparent to its participants and regulators.

The board and governance arrangements, generally, should support the use of clear and comprehensive rules and key procedures, including detailed and effective participant-default rules and procedures. The board should have procedures in place to support its capacity to act appropriately and immediately if any risks arise that threaten the clearing agency's viability as a going concern. The governance arrangements should also provide for effective decision making in a crisis and support any procedures and rules designed to facilitate the recovery or orderly wind-down of the clearing agency.

In addition, the governance of the risk-management function is particularly important. It is essential that the clearing agency's risk-management personnel have sufficient independence, authority, resources, and access to the board to ensure that the operations of the clearing agency are consistent with the risk-management framework set by the board. The reporting lines for risk management should be clear and separate from those for other operations of the clearing agency, and there should be an additional direct reporting line to a non-executive director on the board via a chief risk officer (or equivalent). To help the board discharge its risk-related responsibilities, the clearing agency should establish a risk committee, responsible for advising the board on the clearing agency's overall current and future risk tolerance and strategy. The committee should have a clear and public mandate and operating procedures and, where appropriate, have access to external expert advice.

(9) Subsection 3.2(9) of the Rule requires that the clearing agency validate, on an ongoing basis, the models and their methodologies used to quantify, aggregate, and manage its risks. The validation process should be independent of the development, implementation, and operation of the models and their methodologies. Validation should include (i) an evaluation of the conceptual soundness of (including developmental evidence supporting) the models, (ii) an ongoing monitoring process that includes verification of processes and benchmarking, and (iii) an analysis of outcomes that includes backtesting.

(10) An independent review may include a review carried out by qualified individuals who are independent of the development, implementation and operation of the models and their methodologies, as well as the development, implementation and operation of a validation process for these models.

(11) Under subsection 3.2(11) of the Rule, the clearing agency's board is required to consider all relevant stakeholders' interests, including those of its direct and indirect participants, in making major decisions, including those relating to the system's design, rules, and overall business strategy. In particular, where the clearing agency has cross-border operations, it should ensure that the full range of views across the jurisdictions in which it operates is appropriately considered in the decision-making process. Mechanisms for involving stakeholders in the board's decision-making process may include stakeholder representation on the board (including direct and indirect participants), user committees, and public consultation processes. As opinions among interested parties are likely to differ, the clearing agency should have clear processes for identifying and appropriately managing the diversity of stakeholder views and any conflicts of interest between stakeholders and the clearing agency. Without prejudice to local requirements on confidentiality and disclosure, the clearing agency should clearly and promptly inform its owners, participants, other users, and, where appropriate, the broader public, of the outcome of major decisions, and consider providing summary explanations for decisions to enhance transparency where it would not endanger candid board debate or commercial confidentiality.

– ***Board and advisory committees***

(12) Subsection 3.2(12) of the Rule requires the board of directors of the clearing agency to establish and maintain one or more board or advisory committees on risk management, finance and audit functions. All such committees should have clearly assigned responsibilities and procedures.

A clearing agency's internal audit function should have sufficient resources and independence from management to provide, among other activities, a rigorous and independent assessment of the effectiveness of its risk-management and control processes. A board will typically establish an audit committee to oversee the internal audit function. In addition to reporting to senior management, the audit function should have regular access to the board through an additional reporting line.

Under paragraph 3.2(12)(d) of the Rule, a committee will be required to have an appropriate composition of sufficiently knowledgeable independent individuals. With respect to independence, policies and procedures related to committees should include processes to identify, address, and manage potential conflicts of interest. Conflicts of interest include, for example, circumstances in which a board member has material competing business interests with the clearing agency.

Framework for comprehensive management of risks

– ***General principle***

3.3 (1) Subsection 3.3(1) of the Rule requires a recognized clearing agency to have a clear and documented risk-management framework for comprehensively managing its various risks. As further discussed in subsection 3.3(2), the clearing agency should take an integrated and comprehensive view of its risks, including the risks it bears from and poses to its participants and their customers, as well as the risks it bears from and poses to other entities, such as other clearing agencies, settlement banks, liquidity providers, and service providers (for example, matching and portfolio compression service providers). The clearing agency should consider how various risks relate to, and interact with, each other. The clearing agency should have a sound risk-management framework (including policies, procedures, and systems) that enable it to identify, measure, monitor, and manage effectively the range of risks that arise in or are borne by the clearing agency. The clearing agency's framework should include the identification and management of interdependencies. The clearing agency should also provide appropriate incentives and the relevant information for its participants and other entities to manage and contain their risks vis-à-vis the clearing agency. The board of directors plays a critical role in establishing and maintaining a sound risk-management framework.

– ***Policies, procedures and systems, etc.***

(2) Under paragraphs 3.3(2)(a) and (b) of the Rule, the clearing agency's risk management framework must have appropriate risk-management policies, procedures, and systems that are subject to periodic review. To establish a sound risk-management framework, the clearing agency should first identify the range of risks that arise within the clearing agency and the risks it directly bears from or poses to its participants, its participants' customers, and other entities. It should identify those risks that could materially affect its ability to perform or to provide services as expected. Typically these include legal, credit, liquidity, and operational risks. The clearing agency should also consider other relevant and material risks, such as market (or price), concentration, and general business risks, as well as risks that do not appear to be significant in isolation, but when combined with other risks become material. The consequences of these risks may have significant reputational effects on the clearing agency and may undermine its financial soundness as well as the stability of the broader financial markets. In identifying risks, the clearing agency should take a broad perspective and identify the risks that it bears from other entities, such as other clearing agencies, settlement banks, liquidity providers, service providers, and any entities that could be materially affected by the clearing agency's inability to provide services.

The clearing agency's board is ultimately responsible for managing the clearing agency's risks. The board should determine an appropriate level of aggregate risk tolerance and capacity for the clearing agency. The board and senior management should establish policies, procedures, and controls that are consistent with the clearing agency's risk tolerance and capacity. The clearing agency's policies, procedures, and controls serve as the basis for identifying, measuring, monitoring, and managing the clearing agency's risks and should cover routine and non-routine events, including the potential inability of a participant, or the clearing agency itself, to meet its obligations. The clearing agency's policies, procedures, and controls should address all relevant risks. These policies, procedures, and controls should be part of a coherent and consistent framework that is reviewed and updated periodically and shared with the relevant authorities.

(c) In establishing risk-management policies, procedures, and systems, the clearing agency is required to encourage participants and, where relevant, their customers to manage and contain the risks they pose to the clearing agency. Doing so can help reduce the moral hazard that may arise from formulas in which losses are shared equally among participants or other formulas where losses are not shared proportionally to risk.

(3) (a) Under paragraph 3.3(3)(a) of the Rule, the clearing agency is expected to regularly review, and develop risk-management tools, to address the material risks it bears from and poses to other entities (such as other clearing agencies, settlement banks, liquidity providers, and service providers). In particular, the clearing agency should have effective risk-management tools to manage all relevant risks, including the legal, credit, liquidity, general business, and operational risks that it bears from and poses to other entities, in order to limit the effects of disruptions from and to such entities as well as disruptions from and to the broader financial markets. These tools should include business continuity arrangements that allow for rapid recovery and resumption of critical operations and services in the event of operational disruptions, liquidity risk-management techniques, and recovery or orderly wind-down plans (as further discussed under paragraph 3.3(3)(c). Because of the interdependencies between and among systems, the clearing agency should ensure that its crisis-management arrangements allow for effective coordination among the affected entities, including cases in which its own viability or the viability of an interdependent entity is in question.

(b) In respect of recovery and orderly wind-down, the clearing agency must identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern. These scenarios should take into account the various independent and related risks to which the clearing agency is exposed. The clearing agency must also assess the effectiveness of a full range of options for recovery or orderly wind-down.

(c) Using the analysis required under paragraph 3.3(3)(b) of the Rule (and taking into account any constraints potentially imposed by domestic legislation), the clearing agency is required to prepare appropriate plans for its recovery or orderly wind-down. The plan should contain, among other elements, a substantive summary of the key recovery or orderly wind-down strategies, the identification of the clearing agency's critical operations and services, and a description of the measures needed to implement the key strategies. The clearing agency should have the capacity to identify and provide to related entities the information needed to implement the plan on a timely basis during stress scenarios. In addition, these plans should be reviewed and updated regularly.

(e) Moreover, the clearing agency should employ robust information and risk-control systems to provide it with the capacity to obtain timely information necessary to apply risk-management policies and procedures. In particular, these systems should allow for the accurate and timely measurement and aggregation of risk exposures across the clearing agency, the management of individual risk exposures and the interdependencies between them, and the assessment of the impact of various economic and financial shocks that could affect the clearing agency. Information systems should also enable the clearing agency to monitor its credit and liquidity exposures, overall credit and liquidity limits, and the relationship between these exposures and limits. These information systems should permit, where practicable, the provision of real time information to enable participants to manage risks. If the clearing agency does not provide real time information, it should provide clear, full, updated information to participants throughout the day (as frequently as possible) and consider appropriate enhancements to its systems.

Where appropriate, the clearing agency should also provide its participants and its participants' customers with the relevant information to manage and contain their credit and liquidity risks. The clearing agency may consider it beneficial to provide its participants and its participants' customers with information necessary to monitor their credit and liquidity exposures, overall credit and liquidity limits, and the relationship between these exposures and limits. For example, where the clearing agency permits participants' customers to create exposures in the clearing agency that are borne by the participants, the clearing agency should provide participants with the capacity to limit such risks.

(f) Under paragraph 3.3(3)(f), the clearing agency is required to have comprehensive internal processes to help the board and senior management monitor and assess the adequacy and effectiveness of the clearing agency's risk-management policies, procedures, systems, and controls. While business-line management serves as the first "line of defence," the adequacy of and adherence to control mechanisms should be assessed regularly through independent compliance programmes and independent audits. Audits should be performed by qualified and independent individuals who did not participate in the creation of the control mechanisms. At times the clearing agency may find it necessary to engage a team of external auditors. A robust internal audit function can provide an independent assessment of the effectiveness of the clearing agency's risk-management and control processes. An emphasis on the adequacy of controls by senior management and the board as well as internal audit can also help counterbalance a business-management culture that may favour business interests over establishing and adhering to appropriate controls. In addition, proactive engagement of audit and internal control functions when changes are under consideration can also be beneficial. Specifically, clearing agencies that involve their internal audit function in pre-implementation reviews will often reduce their need to expend additional resources to retrofit processes and systems with critical controls that had been overlooked during initial design phases and construction efforts.

Credit risk

– *General principle*

3.4 (1) Credit risk is broadly defined as the risk that a counterparty will be unable to meet fully its financial obligations when due or at any time in the future. The default of a participant (and its affiliates) has the potential to cause severe disruptions to a clearing agency, its other participants, and the financial markets more broadly. In meeting the requirement of subsection 3.4(1) of the Rule, a recognized clearing agency that acts as, or performs the services of, a CCP or SSS is required to measure, monitor and manage its credit exposures. Credit exposure may arise from current exposures, potential future exposures, or both. Current exposure, in this context, is defined as the loss that a clearing agency (or in some cases, its participants) would face immediately if a participant were to default. Potential future exposure is broadly defined as any potential credit exposure that a clearing agency could face at a future point in time. The type and level of credit exposure faced by a clearing agency will vary based on its design and the credit risk of the counterparties concerned. The clearing agency should also identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.

(2) An SSS may face a number of credit risks from its participants or its settlement processes. An SSS faces counterparty credit risk when it extends intraday or overnight credit to participants. This extension of credit creates current exposures and can lead to potential future exposures, even when the SSS accepts collateral to secure the credit. An SSS would face potential future exposure if the value of collateral posted by a participant to cover this credit might fall below the amount of credit extended to the participant by the SSS, leaving a residual exposure. In addition, an SSS that explicitly guarantees settlement would face current exposures if a participant were not to fund its net debit position or meet its obligations to deliver financial instruments. Further, depending on the settlement mechanism, the SSS or its participants face principal risk, which is the risk of loss of securities or payments made to the defaulting participant prior to the detection of the default. If the clearing agency provides the services of an SSS, it 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 also the Rule's section 3.5 on collateral requirements).

(3) A CCP typically faces both current and potential future exposures because it typically holds open positions with its participants. Current exposure arises from fluctuations in the market value of open positions between the CCP and its participants. Potential future exposure arises from potential fluctuations in the market value of a defaulting participant's open positions until the positions are closed out, fully hedged, or transferred by the CCP following an event of default. For example, during the period in which a CCP neutralizes or closes out a position following the default of a participant, the market value of the position or asset being cleared may change, which could increase the CCP's credit exposure, potentially significantly. A CCP can also face potential future exposure due to the potential for collateral (initial margin) to decline significantly in value over the close-out period. If the clearing agency is operating as a CCP, it 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 also the Rule's sections 3.5 on collateral requirements and 3.6 on margin requirements).

(4) Subsection 3.4(4) of the Rule sets out the requirement that if the clearing agency acts as a CCP, it must maintain, in addition to the financial resources described in paragraph 3.4(3) of the Rule, financial resources sufficient to meet a so-called "Cover 1" threshold.

(5) The Rule also requires that the clearing agency that acts as a CCP and that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions to 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 (otherwise known as a "Cover 2" threshold).

The Commission is of the view that a CCP will be involved in activities with a more-complex risk profile where it is clearing, for example, credit default swaps, credit default futures, any derivatives that reference either credit default swaps or credit default futures, and any other products the characteristics of which include jump-to-default price changes or high correlations with potential participant defaults.

In determining whether a CCP is systemically important in multiple jurisdictions, the Commission will consider, among other factors, (i) the location of its participants, (ii) the aggregate volume and value of transactions that originate in each jurisdiction in which it operates, (iii) the proportion of its total volume and value of transactions that originate in each jurisdiction in which it operates, (iv) the range of currencies in which the instruments it clears are cleared or settled, (v) any links it has with other clearing agencies, payment systems or trade repositories located in other jurisdictions, and (vi) the extent to which it clears instruments that are subject to mandatory clearing obligations in multiple jurisdictions. The Commission will also consider whether the CCP has been designated as systemically important by a regulatory authority both in Canada and outside Canada.

– ***Identifying, measuring and monitoring credit exposures***

(6) Under subsection 3.4(6), the clearing agency must establish a robust framework to manage its credit exposures to its participants and those arising from its clearing and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both. The clearing agency must also routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.

If the clearing agency provides the services of an SSS, it should frequently and regularly measure and monitor its credit risks throughout the day using timely information. The SSS should ensure it has access to adequate information, such as appropriate collateral valuations, to allow it to measure and monitor its current exposures and degree of collateral coverage. If credit risk exists between participants, the SSS should provide the capacity to participants to measure and monitor their current exposures to each other in the system or adopt rules that require participants to provide relevant exposure information. Current exposure should be relatively straightforward to measure and monitor; however, potential future exposure may require modeling or estimation. In order to monitor its risks associated with current exposure, an SSS should monitor market conditions for developments that could affect these risks, such as collateral values. In order to estimate its potential future exposure and associated risk, an SSS should model possible changes in collateral values and market conditions over an appropriate liquidation period. An SSS, where appropriate, should monitor the existence of large exposures to its participants and their customers. Additionally, it should monitor any changes in the creditworthiness of its participants. If a financial exposure is a liquidity exposure, section 3.7 would apply.

The SSS should mitigate its credit risks to the extent possible. The SSS should, for example, eliminate its or its participants' principal risk associated with the settlement process by employing an exchange-of-value settlement system. The use of a system that settles securities and funds on a gross, obligation-by-obligation basis would further reduce credit and liquidity exposures among participants and between participants and the SSS. In addition, the SSS should limit its current exposures by limiting intraday credit extensions and, where relevant, overnight credit extensions. Such limits should balance the usefulness of credit to facilitate settlement within the system against the SSS's credit exposures.

In order to manage the risk from a participant default, the SSS should consider the impact of participant defaults and use robust techniques for managing collateral. The 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 (equity can be used after deduction of the amount dedicated to cover general business risk). By requiring collateral to cover the credit exposures, an SSS mitigates, and in some cases eliminates, its current exposures and may provide participants with an incentive to manage the credit risks they pose to the SSS or other participants. Further, this collateralization allows an SSS that employs certain settlement mechanisms to avoid unwinding transactions or to mitigate the effect of an unwind should a participant default on its obligations. Collateral and other equivalent financial resources can fluctuate in value, however, so the SSS needs to establish prudent haircuts to mitigate the resulting potential future exposures.

If the clearing agency is acting as a CCP, it should frequently and regularly measure and monitor its credit risks throughout the day using timely information. The CCP should ensure that it has access to adequate information to allow it to measure and monitor its current and potential future exposures. Current exposure is relatively straightforward to measure and monitor when relevant market prices are readily available. Potential future exposure is typically more challenging to measure and monitor and usually requires modelling and estimation of possible future market price developments and other variables and conditions, as well as specifying an appropriate time horizon for the close out of defaulted positions. In order to estimate the potential future exposures that could result from participant defaults, the CCP should identify risk factors and monitor potential market developments and conditions that could affect the size and likelihood of its losses in the close out of a defaulting participant's positions. The CCP should monitor the existence of large exposures to its participants and, where appropriate, their customers. Additionally, it should monitor any changes in the creditworthiness of its participants.

The CCP should mitigate its credit risk to the extent possible. For example, to control the build-up of current exposures, the CCP should require that open positions be marked to market and that each participant pay funds, typically in the form of variation margin, to cover any loss in its positions' net value at least daily; such a requirement limits the accumulation of current exposures and therefore mitigates potential future exposures. In addition, the CCP should have the authority and operational capacity to make intraday margin calls, both scheduled and unscheduled, from participants. Further, the CCP may choose to place limits on credit exposures in some cases, even if collateralised. Limits on concentrations of positions or additional collateral requirements may also be warranted.

A CCP typically uses a sequence of prefunded financial resources, often referred to as a "waterfall," to manage its losses caused by participant defaults. The waterfall may include a defaulter's initial margin, the defaulter's contribution to a prefunded default arrangement, a specified portion of the CCP's own funds, and other participants' contributions to a prefunded default arrangement. Initial margin is used to cover a CCP's potential future exposures, as well as current exposures not covered by variation margin, to each participant with a high degree of confidence. However, a CCP generally remains exposed to residual risk (or tail risk) if a participant defaults and market conditions concurrently change more drastically than is anticipated in the margin calculations. In such scenarios, a CCP's losses may exceed the defaulting participant's posted margin. Although it is not feasible to cover all such tail risks given the unknown scope of potential losses due to price changes, the CCP should maintain additional financial resources, such as additional collateral or a prefunded default arrangement, to cover a portion of the tail risk.

– ***Stress testing***

(8) If the clearing agency is operating as a CCP, subsection 3.4(8) of the Rule sets out requirements governing routine stress testing of the adequacy of the clearing agency's total financial resources. The CCP must determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default of one or more participants in extreme but plausible market conditions through rigorous stress testing. The CCP must 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 are to be performed at least daily, using standard and predetermined parameters and assumptions. On at least a monthly basis, the CCP must 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 full validation of the CCP's risk-management model must be performed at least annually.

Moreover, the CCP should conduct, as appropriate, reverse stress tests aimed at identifying the extreme scenarios and market conditions in which its total financial resources would not provide sufficient coverage of tail risk. Reverse stress tests require a CCP to model hypothetical positions and extreme market conditions that may go beyond what are considered extreme but plausible market conditions in order to help understand margin calculations and the sufficiency of financial resources given the underlying assumptions modelled. Modelling extreme market conditions can help a CCP determine the limits of its current model and resources. However, it requires the CCP to exercise judgment when modelling different markets and products. The CCP should develop hypothetical extreme scenarios and market conditions tailored to the specific risks of the markets and of the products it serves. Reverse stress testing should be considered a helpful management tool but need not necessarily drive the CCP's determination of the appropriate level of financial resources.

(10) Extreme but plausible conditions should not be considered a fixed set of conditions, but rather, conditions that evolve. Stress tests should quickly incorporate emerging risks and changes in market assumptions (for example, departures from usual patterns of co-movements in prices among the products the CCP clears). If the CCP proposes to clear new products, it should consider movements in prices of any relevant related products.

– ***Uncovered credit losses***

(11) As required by subsection 3.4(11) of the Rule, the clearing agency 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 clearing agency. The rules and procedures of the clearing agency should expressly set out a waterfall, including the circumstances in which specific resources of the clearing agency can be used in a participant default. For the purposes of subsection 3.4(12) of the Rule, the clearing agency should not include as "available" to cover credit losses from participant defaults those resources that are needed to cover current operating expenses, potential general business losses, or other losses from other activities in which the clearing agency is engaged. In addition, if the clearing agency serves multiple markets (either in the same jurisdiction or multiple jurisdictions), its ability to use resources supplied by participants in one market to cover losses from a participant default in another market should have a sound legal basis, be clear to all participants, and avoid significant levels of contagion risk between markets and participants. The design of the clearing agency's stress tests should take into account the extent to which resources are pooled across markets in scenarios involving one or more participant defaults across several markets.

(12) In certain extreme circumstances, the post-liquidation value of the collateral and other financial resources that secure the clearing agency's credit exposures may not be sufficient to cover credit losses resulting from those exposures fully. The clearing agency should analyze and plan for how it would address any uncovered credit losses. The clearing agency 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 clearing agency. The clearing agency's rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds a clearing agency may borrow from liquidity providers. These rules and procedures should also indicate the clearing agency's process to replenish any financial resources that the clearing agency may employ during a stress event, so that it can continue to operate in a safe and sound manner.

Collateral

– ***General principle***

3.5 (1) (a) Collateralizing credit exposures protects a clearing agency, and where relevant, its participants, against potential losses in the event of a participant default. Besides mitigating a clearing agency's own credit risk, the use of collateral can provide participants with incentives to manage the risks they pose to a clearing agency or other participants. Paragraph 3.5(1)(a) of the Rule sets out the general principle that a recognized clearing agency that acts as, or performs the services of, a CCP or SSS must limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks. Prudent collateral acceptance and valuation practices are further required under subsection 3.5(2) of the Rule.

(b) While the clearing agency is required to generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks, in the normal course of business, it may be exposed to risk from certain types of collateral that are not considered to have low credit, liquidity, and market risks. However, in some instances, these assets may be acceptable collateral for credit purposes if an appropriate haircut is applied. Where the clearing agency accepts collateral with credit, liquidity, and market risks above minimum levels, it should demonstrate that it sets and enforces appropriately conservative haircuts and concentration limits. The clearing agency must apply prudent haircuts to the value of the collateral to achieve a high degree of confidence that the liquidation value of the collateral will be greater than or equal to the obligation that the collateral secures in extreme but plausible market conditions. Additionally, the clearing agency should have the capacity to use the collateral promptly when needed.

– ***Valuation practices and haircuts***

(2) In order to have adequate assurance of the collateral's value in the event of liquidation, subsection 3.5(2) of the Rule requires the clearing agency to establish, implement and maintain collateral acceptance and valuation practices. The clearing agency should regularly adjust its requirements for acceptable collateral in accordance with changes in underlying risks. When evaluating types of collateral, the clearing agency should consider potential delays in accessing the collateral due to the settlement conventions for transfers of the asset. In addition, participants should not be allowed to post their own debt or equity securities, or debt or equity of companies closely linked to them, as collateral, as further required under paragraph 3.5(3)(a) of the Rule. More generally, the clearing agency should mitigate specific wrong-way risk, as further required under paragraph 3.5(3)(b) of the Rule. The clearing agency should measure and monitor the correlation between a counterparty's creditworthiness and the collateral posted and take measures to mitigate the risks, for instance by setting more-conservative haircuts, as otherwise required by this subsection and under paragraph 3.5(1)(b) and subsection 3.5(4) of the Rule.

If the clearing agency plans to use assets held as collateral to secure liquidity facilities in the event of a participant default, the clearing agency will also need to consider, in determining acceptable collateral, what will be acceptable as security to lenders offering liquidity facilities.

Additionally, the clearing agency is required to apply prudent haircuts to the value of the collateral, in order to achieve a high degree of confidence that the liquidation value of the collateral will be greater than or equal to the obligation that the collateral secures in extreme but plausible market conditions, as well as to reduce the need for procyclical adjustments. Haircuts should reflect the potential for asset values and liquidity to decline over the interval between their last revaluation and the time by which the clearing agency can reasonably assume that the assets can be liquidated. Haircuts also should incorporate assumptions about collateral value during stressed market conditions and reflect regular stress testing that takes into account extreme price moves, as well as changes in market liquidity for the asset.

(3) (a) Under paragraph 3.5(3)(a) of the Rule, the clearing agency is required to prohibit participants from posting collateral that is their own debt or equity securities, or debt or equity of their affiliates. Covered bonds issued by a participant or a closely linked company may be accepted as collateral, provided the underlying collateral of these covered bonds would be appropriately segregated by the issuer from its own assets and considered as acceptable under this section.

(b) Specific wrong-way risk refers to the risk that an exposure to a counterparty is highly likely to increase when the creditworthiness of that counterparty is deteriorating. Generally, the clearing agency must mitigate specific wrong-way risk by limiting the acceptance of collateral that would likely lose value in the event that the participant providing the collateral defaults.

(c) The clearing agency must, at a minimum, mark its collateral to market daily. “Marking to market” is the practice if revaluing securities and other financial instruments, including collateral, using current market prices. If market prices do not fairly represent the true value of the assets, the clearing agency should have the authority to exercise discretion in valuing assets according to predefined and transparent methods.

(d) The clearing agency’s haircut procedures must be validated at least annually. Validation should be performed by personnel of sufficient expertise who are independent of the personnel that created and applied the haircut procedures. These expert personnel could be drawn from within the clearing agency. However, a review by personnel external to the clearing agency may also be necessary at times.

– ***Limiting procyclicality***

(4) Subsection 3.5(4) of the Rule requires that the clearing agency appropriately address procyclicality in its collateral arrangements. To the extent practicable and prudent, the clearing agency should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions in order to reduce the need for procyclical adjustments. In this context, procyclicality typically refers to changes in risk-management practices that are positively correlated with market, business, or credit cycle fluctuations and that may cause or exacerbate financial instability. While changes in collateral values tend to be procyclical, collateral arrangements can increase procyclicality if haircut levels fall during periods of low market stress and increase during periods of high market stress. For example, in a stressed market, the clearing agency may require the posting of additional collateral both because of the decline of asset prices and because of an increase in haircut levels. Such actions could exacerbate market stress and contribute to driving down asset prices further, resulting in additional collateral requirements. This cycle could exert further downward pressure on asset prices. Addressing issues of procyclicality may create additional costs for clearing agencies and their participants in periods of low market stress because of higher collateral requirements, but result in additional protection and potentially less-costly and less-disruptive adjustments in periods of high market stress.

– ***Concentrations limits or charges***

(5) Under subsection 3.5(5) of the Rule, the clearing agency is required to avoid concentrated holdings of certain assets, as they can significantly impair the ability to liquidate such assets quickly without significant adverse price effects. High concentrations within holdings can be avoided by establishing concentration limits, thereby restricting participants’ ability to provide certain collateral assets above a specified threshold. High concentrations can also be avoided by imposing concentration charges, which would penalize participants for maintaining holdings of certain assets beyond a specified threshold. Further, concentration limits and charges should be constructed to prevent participants from covering a large share of their collateral requirements with the most risky assets acceptable.

– ***Cross-border collateral***

(7) Subsection 3.5(7) requires the clearing agency, if it accepts cross-border (or foreign) collateral, to identify and mitigate any additional risks associated with its use and ensure that it can be used in a timely manner. A cross-border collateral arrangement can provide an efficient liquidity bridge across markets, help relax collateral constraints for some participants, and contribute to the efficiency of some asset markets. These linkages, however, can also create significant interdependencies and risks to the clearing agency that should be evaluated and managed. For example, the clearing agency should have appropriate legal and operational safeguards to ensure that it can use the cross-border collateral in a timely manner and should identify and address any significant liquidity effects. The clearing agency also should consider foreign-exchange risk where collateral is denominated in a currency different from that in which the exposure arises, and set haircuts to address the additional risk to a high level of confidence. The clearing agency should have the capacity to address potential operational challenges of operating across borders, such as differences in time zones or operating hours of foreign CSDs or custodians.

– ***Collateral management systems***

(8) Under subsection 3.5(8) of the Rule, the clearing agency is required to use a well-designed and operationally flexible collateral management system. Such a system should accommodate changes in the on-going monitoring and management of collateral. Where appropriate, the system should allow for the timely calculation and execution of margin calls, the management of margin call disputes, and the accurate daily reporting of levels of initial and variation margin. Further, a collateral management system should track the extent of reuse of collateral (both cash and non-cash) and the rights of the clearing agency to the collateral provided to it by its counterparties. The clearing agency’s collateral management system should also have functionality to accommodate the timely deposit, withdrawal, substitution, and liquidation of collateral. The clearing agency should allocate sufficient resources to its collateral management system to ensure an appropriate level of operational performance, efficiency, and effectiveness. Senior management should ensure that the clearing agency's collateral management function is adequately staffed to ensure smooth operations, especially during times of market stress, and that all activities are tracked and reported, as appropriate, to senior management.

Additionally, the clearing agency should have clear and transparent rules regarding the reuse of collateral. Reuse of collateral refers to the clearing agency's subsequent use of collateral that has been provided by participants in the normal course of business. This differs from the clearing agency's use of collateral in a default scenario during which the defaulter's collateral, which has become the property of the clearing agency, can be used to access liquidity facilities or can be liquidated to cover losses. In particular, the rules should clearly specify when a clearing agency may reuse its participant collateral and the process for returning that collateral to participants. In general, clearing agency should not rely on the reuse of collateral as an instrument for increasing or maintaining its profitability. However, it may invest any cash collateral received from participants on their behalf.

Margin

– ***General principle***

3.6 (1) An effective margining system is a key risk-management tool for a CCP to manage the credit exposures posed by its participants' open positions. Accordingly, a CCP will typically collect margin (i.e. collateral) to assure performance and to mitigate its credit exposures for all products that it clears if a participant defaults. Subsection 3.6(1) of the Rule sets out the general requirement that where a recognized clearing agency is operating as a CCP, it must cover its credit exposures to its participants for all products through an effective risk-based margin system. The balance of section 3.6 of the Rule also has application to such a CCP.

Margin systems typically differentiate between initial margin and variation margin. Initial margin is typically collected to cover potential changes in the value of each participant's position (that is, potential future exposure) over the appropriate close-out period in the event the participant defaults. Calculating potential future exposure requires modeling potential price movements and other relevant factors, as well as specifying the target degree of confidence and length of the close-out period. Variation margin is collected and paid out to reflect current exposures resulting from actual changes in market prices. To calculate variation margin, open positions are marked to current market prices and funds are typically collected from (or paid to) a counterparty to settle any losses (or gains) on those positions.

The CCP's margin system should be regularly reviewed. Validation of the margin system should be performed by personnel of sufficient expertise who are independent of the personnel that created and apply the margin system. These expert personnel could be drawn from within the CCP. However, a review by personnel external to the CCP may also be necessary at times.

– ***Margin system***

(2) When setting margin requirements, the 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. Product risk characteristics can include, but are not limited to, price volatility and correlation, non-linear price characteristics (for example, where some derivatives, such as options, provide payoff functions that are not linear as compared to the payoff of the underlying asset), jump-to-default risk (i.e. the risk of a default that would result in significant financial payment obligations, such as for credit default swap protection sellers), market liquidity, possible liquidation procedures (for example, tender by or commission to market-makers), and correlation between price and position such as wrong-way risk. Margin requirements need to account for the complexity of the underlying instruments and the availability of timely, high-quality pricing data. For example, OTC derivatives require more-conservative margin models because of their complexity and the greater uncertainty of the reliability of price quotes. Furthermore, the appropriate close-out period may vary among products and markets depending upon the product's liquidity, price, and other characteristics. Additionally, a CCP for cash markets (or physically deliverable derivatives products) should take into account the risk of "fails to deliver" of securities (or other relevant instruments) in its margin methodology. In a fails-to-deliver scenario, the CCP should continue to margin positions for which a participant fails to deliver the required security (or other relevant instrument) on the settlement date.

– ***Price information***

(3) The CCP is required to have a reliable source of timely price data for its margin system, as such data is critical for the system to operate accurately and effectively. In most cases, the CCP should rely on market prices from continuous, transparent, and liquid markets. If the CCP acquires pricing data from third-party pricing services, it should continually evaluate the data's reliability and accuracy.

The CCP should also have procedures and sound valuation models for addressing circumstances in which pricing data from markets or third-party sources are not readily available or reliable. The valuation models should be validated under a variety of market scenarios at least annually by a qualified and independent party to ensure that its model accurately produces appropriate prices, and where appropriate, the CCP should adjust its calculation of initial margin to reflect any identified model risk. The

CCP should address all pricing and market liquidity concerns on an ongoing basis in order to conduct daily measurement of its risks.

– ***Initial margin methodology***

(4) Subsections 3.6(4) to 3.6(6) of the Rule set out requirements relating to the initial margin methodology of the CCP. Under subsection 3.6(4) of the Rule, the CCP is required to 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. Under paragraph 3.6(5)(a) of the Rule, initial margin is required to meet an established single-tailed confidence level of at least 99 percent with respect to the estimated distribution of future exposure.[10] Under paragraph 3.6(6)(a) of the Rule, where the CCP calculates margin at the portfolio level, the above requirement applies to each portfolio's distribution of future exposure. If the CCP calculates margin at more-granular levels, such as at the sub-portfolio level or by product, the requirement under paragraph 3.6(5)(a) of the Rule must be met for the corresponding distributions of future exposure at a stage prior to margining among sub-portfolios or products, as specified by paragraph 3.6(6)(b) of the Rule. Under paragraph 3.6(5)(b) of the Rule, the initial margin model should (i) 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), (ii) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products, and (iii) to the extent practicable and prudent, limit the need for destabilizing, procyclical changes.

In respect of close-out periods, the CCP should select an appropriate period for each product that it clears and document the close-out periods and related analysis for each product type. The CCP should base its determination of the close-out periods for its initial margin model upon historical price and liquidity data, as well as reasonably foreseeable events in a default scenario. The close-out period should account for the impact of a participant's default on prevailing market conditions. Inferences about the potential impact of a default on the close-out period should be based on historical adverse events in the product cleared, such as significant reductions in trading or other market dislocations. The close-out period should be based on anticipated close-out times in stressed market conditions but may also take into account the CCP's ability to hedge effectively the defaulter's portfolio. Further, close-out periods should be set on a product-specific basis because less-liquid products might require significantly longer close-out periods. The CCP should also consider and address position concentrations, which can lengthen close-out timeframes and add to price volatility during close outs.

The CCP should select an appropriate sample period for its margin model to calculate required initial margin for each product that it clears and should document the period and related analysis for each product type. The amount of margin may be very sensitive to the sample period and the margin model. Selection of the period should be carefully examined based on the theoretical properties of the margin model and empirical tests on these properties using historical data. In certain instances, the CCP may need to determine margin levels using a shorter historical period to reflect new or current volatility in the market more effectively. Conversely, the CCP may need to determine margin levels based on a longer historical period in order to reflect past volatility. The CCP should also consider simulated data projections that would capture plausible events outside of the historical data especially for new products without enough history to cover stressed market conditions.

The CCP should identify and mitigate any credit exposure that may give rise to specific wrong-way risk. Specific wrong-way risk arises where an exposure to a counterparty is highly likely to increase when the creditworthiness of that counterparty is deteriorating. For example, participants in a CCP clearing credit-default swaps should not be allowed to clear single-name credit-default swaps on their own names or on the names of their legal affiliates. The CCP is expected to review its portfolio regularly in order to identify, monitor, and mitigate promptly any exposures that give rise to specific wrong-way risk.

The CCP should appropriately address procyclicality in its margin arrangements. In this context, procyclicality typically refers to changes in risk-management practices that are positively correlated with market, business, or credit cycle fluctuations and that may cause or exacerbate financial instability. For example, in a period of rising price volatility or credit risk of participants, the CCP may require additional initial margin for a given portfolio beyond the amount required by the current margin model. This could exacerbate market stress and volatility further, resulting in additional margin requirements. These adverse effects may occur without any arbitrary change in risk-management practices. To the extent practicable and prudent, the CCP should adopt forward-looking and relatively stable and conservative margin requirements that are specifically designed to limit the need for destabilizing, procyclical changes. To support this objective, the CCP could consider increasing the size of its prefunded default arrangements to limit the need and likelihood of large or unexpected margin calls in times of market stress. These procedures may create additional costs for central counterparties and their participants in periods of low market volatility due to higher margin or prefunded default arrangement contributions, but they may also result in additional protection and potentially less costly and less disruptive adjustments in periods of high market volatility. In addition, transparency regarding margin practices when market volatility increases may help mitigate the effects of procyclicality. Nevertheless, it may be impractical and even imprudent for a CCP to establish margin requirements that are independent of significant or cyclical changes in price volatility.

[10] A single-tailed (also known as one-tailed or one-sided) confidence interval of at least 99% means that the initial margin should cover estimated future loss over an appropriate time horizon at least 99% of the time.

– *Variation margin*

(7) (a) A CCP faces the risk that its exposure to its participants can change rapidly as a result of changes in prices, positions, or both. Adverse price movements, as well as participants building larger positions through new trading, can rapidly increase a CCP's exposures to its participants (although some markets may impose trading limits or position limits that reduce this risk). Under paragraph 3.6(7)(a) of the Rule, the CCP is required to ascertain its current exposure to each participant by marking each participant's outstanding positions to current market prices (i.e. to mark participant positions to market) and collect variation margin at least daily to limit the build-up of current exposures; such a requirement limits the accumulation of current exposures and therefore mitigates potential future exposures.

(b) In addition, the CCP is required to have the authority and operational capacity to make intraday margin calls, both scheduled and unscheduled, to participants. The CCP should consider the potential impact of its intraday variation margin collections and payments on the liquidity position of its participants and should have the operational capacity to make intraday variation margin payments. Further, the CCP may choose to place limits on credit exposures in some cases, even if collateralized. Limits on concentrations of positions or additional collateral requirements may also be warranted.

– *Portfolio margining and cross-margining*

(8) Subsection 3.6(8) of the Rule sets out requirements for the CCP, if it offers portfolio margining, subject to the segregation and portability requirements under section 3.14. The offsets the CCP may allow, where the risk of one product is significantly and reliably correlated with the risk of another product, should be based on an economically meaningful methodology that reflects the degree of price dependence between the products. Often, price dependence is modeled through correlations, but more complete or robust measures of dependence should be considered, particularly for non-linear products. In any case, the CCP should consider how price dependence can vary with overall market conditions, including in stressed market conditions. Following the application of offsets, the CCP needs to ensure that the margin meets or exceeds the single-tailed confidence level of at least 99 percent with respect to the estimated distribution of the future exposure of the portfolio. If the CCP uses portfolio margining, it should continuously review and test offsets among products. It should test the robustness of its portfolio method on both actual and appropriate hypothetical portfolios. It is especially important to test how correlations perform during periods of actual and simulated market stress to assess whether the correlations break down or otherwise behave erratically. Prudent assumptions informed by these tests should be made about product offsets.

(9) If authorized, two or more CCPs may enter into a cross-margining arrangement, which is an agreement among the CCPs to consider positions and supporting collateral at their respective organizations as a common portfolio for participants that are members of two or more of the organizations. The aggregate collateral requirements for positions held in cross-margined accounts may be reduced if the value of the positions held at the separate CCPs move inversely in a significant and reliable fashion. In the event of a participant default under a cross-margining arrangement, participating CCPs may be allowed to use any excess collateral in the cross-margined accounts to cover losses.

CCPs that participate in cross-margining arrangements must share information frequently and ensure that they have appropriate safeguards, such as joint monitoring of positions, margin collections, and price information. Each CCP must thoroughly understand the others' respective risk-management practices and financial resources. The CCPs are also required to have harmonized overall risk-management systems and should regularly monitor possible discrepancies in the calculation of their exposures, especially with regard to monitoring how price correlations perform over time. This harmonization is especially relevant in terms of selecting an initial margin methodology, setting margin parameters, segregating accounts and collateral, and establishing default-management arrangements. All of the precautions with regard to portfolio margining discussed above would apply to cross-margining regimes between or among CCPs. CCPs operating a cross-margining arrangement should also analyze fully the impact of cross-margining on prefunded default arrangements and on the adequacy of overall financial resources. The CCPs must have in place arrangements that are legally robust and operationally viable to govern the cross-margining arrangement.

– *Testing model coverage and validation of margin methodology*

(10) (a) Under paragraph 3.6(10)(a) of the Rule, in order to validate its margin models and parameters, the CCP is required to analyze and monitor its model performance and overall margin coverage by conducting rigorous daily backtesting of its initial margin models against identified targets. Backtesting is an ex-post comparison of observed outcomes with the outputs of the margin models. The CCP should backtest its margin coverage using participant positions from each day in order to evaluate whether there are any exceptions to its initial margin coverage. This assessment of margin coverage should be considered an integral part of the evaluation of the model's performance. Coverage should be evaluated across products and participants and take into account portfolio effects across asset classes within the CCP. The initial margin model's actual coverage, along with projected measures of its performance, should meet at least the established single-tailed confidence level of 99 percent with respect to the estimated distribution of future exposure over an appropriate close-out period. In case backtesting indicates that the model did not perform as expected (that is, the model did not identify the appropriate amount of initial margin necessary to achieve the intended coverage), the CCP should have clear procedures for recalibrating its margining system, such as by making adjustments to parameters and sampling periods. Further, the CCP should evaluate the source of backtesting exceedances to determine if a fundamental change to the margin methodology is warranted or if only the recalibration of current parameters is necessary. Backtesting procedures alone are not sufficient to evaluate the effectiveness of models and adequacy of financial resources against forward-looking risks.

In addition, the CCP, at least monthly, and more-frequently as appropriate, should conduct a sensitivity analysis which assesses the coverage of the margin methodology under various market conditions. Sensitivity analysis should also be used to determine the impact of varying important model parameters. Sensitivity analysis is an effective tool to explore hidden shortcomings that cannot be discovered through backtesting. The CCP should conduct sensitivity analysis on its margin model coverage at least monthly using the results of these sensitivity tests and conduct a thorough analysis of the potential losses it could suffer. The CCP should evaluate the potential losses in individual participants' positions and, where appropriate, their customers' positions. Furthermore, for a CCP clearing credit instruments, parameters reflective of the simultaneous default of both participants and the underlying credit instruments should be considered. Sensitivity analysis should be performed on both actual and simulated positions. Rigorous sensitivity analysis of margin requirements may take on increased importance when markets are illiquid or volatile. This analysis should be conducted more frequently when markets are unusually volatile or less liquid or when the size or concentration of positions held by its participants increases significantly.

The results of both the backtesting and sensitivity analyses should be disclosed to participants.

(c) Under paragraph 3.6(10)(c) of the Rule, the CCP is required to regularly review and validate its margin system. The CCP's margin methodology should be reviewed and validated by a qualified and independent party at least annually, or more frequently if there are material market developments. Any material revisions or adjustments to the methodology or parameters should be subject to appropriate governance processes and validated prior to implementation. CCPs operating a cross-margining arrangement should also analyze the impact of cross-margining on prefunded default arrangements and evaluate the adequacy of overall financial resources. Additionally, the margin methodology, including the initial margin models and parameters used by the CCP, should be made as transparent as possible. At a minimum, the basic assumptions of the analytical method selected and the key data inputs should be disclosed to participants. Ideally, the CCP would make details of its margin methodology available to its participants for use in their individual risk-management efforts.

(11) Further to subparagraph 3.6(10)(a)(ii) of the Rule, subsection 3.6(11) of the Rule requires the CCP to test the sensitivity of its margin model coverage using a wide range of parameters and assumptions that reflect possible market conditions in order to understand how the level of margin coverage might be affected by highly stressed market conditions. The CCP should ensure that the range of parameters and assumptions captures a variety of historical and hypothetical conditions, including the most-volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices of products it clears.

– ***Timeliness of margin payments***

(12) The CCP should establish and rigorously enforce timelines for margin collections and payments and set appropriate consequences for failure to pay on time. A CCP with participants in a range of time zones may need to adjust its procedures for margining (including the times at which it makes margin calls) to take into account the liquidity of a participant's local funding market and the operating hours of relevant payment and settlement systems. Margin should be held by the CCP until the exposure has been extinguished; that is, margin should not be returned before settlement is successfully concluded.

Liquidity risk

– ***General principle***

3.7 (1) Liquidity risk arises in a clearing agency when it, its participants, or other entities cannot settle their payment obligations when due as part of the clearing or settlement process. Depending on the design of a clearing agency, liquidity risk can arise between it and its participants, between it and other entities, such as its settlement banks, nostro agents (i.e. those agents who facilitate the settlement of foreign exchange and trade transactions through the use of a bank account held in a foreign country by a domestic bank, denominated in the currency of that country), custodian banks, and liquidity providers, or between participants in a clearing agency. It is particularly important for a clearing agency to manage carefully its liquidity risk if, as is typical in many systems, it relies on incoming payments from participants or other entities during the settlement process in order to make payments to other participants. If a participant or another entity fails to pay the clearing agency, it may not have sufficient funds to meet its payment obligations to other participants. In such an event, the clearing agency would need to rely on its own liquidity resources to cover the funds shortfall and complete settlement. Subsections 3.7(1) and (2) of the Rule, sets out the general principle that a recognized clearing agency that acts as, or performs the services of a CCP or SSS is required to effectively measure, monitor, and manage its liquidity risk, as well as maintain sufficient liquid resources.

– ***Sources of, and managing, liquidity risk***

(3) Subsection 3.7(3) of the Rule requires the clearing agency to manage its liquidity risk from a variety of sources. Within its framework for managing its liquidity risks, the clearing agency must therefore clearly identify its sources of liquidity risk and assess its current and potential future liquidity needs on a daily basis. A clearing agency can face liquidity risk from the default of a participant, or from its settlement banks, nostro agents, custodian banks, and liquidity providers, as well as linked clearing agencies and service providers, if they fail to perform as expected. Moreover, a clearing agency may face additional risk from entities that have multiple roles within the clearing agency (for example, a participant that also serves as the clearing agency's settlement bank or liquidity provider). These interdependencies and the multiple roles that an entity may serve within the clearing agency should be considered in determining the clearing agency's liquidity needs.

A clearing agency that employs a deferred net settlement ("DNS") mechanism, which is a mechanism that settles on a net basis at the end of a pre-defined settlement cycle, may create direct liquidity exposures between participants. A long-standing concern is that these types of systems may address a potential settlement failure by unwinding transfers involving the defaulting participant. An unwind imposes liquidity pressures (and, potentially, replacement costs) on the non-defaulting participants. If all such transfers must be deleted, and if the unwind occurs at a time when money markets and securities lending markets are illiquid (for example, at or near the end of the day), the remaining participants could be confronted with shortfalls of funds or securities that would be extremely difficult to cover. The potential total liquidity pressure of unwinding could be equal to the gross value of the netted transactions.

After identification of its liquidity risks, the clearing agency is required to have a robust framework for their management. The clearing agency should regularly assess its design and operations to manage liquidity risk in the system. Where the clearing agency employs a DNS mechanism, it may be able to reduce its or its participants' liquidity risk by using alternative settlement designs, such as new real-time gross settlement designs with liquidity-saving features or a continuous or extremely frequent batch settlement system. In addition, it could reduce the liquidity demands of its participants by providing participants with sufficient information or control systems to help them manage their liquidity needs and risks. Furthermore, the clearing agency should ensure that it is operationally ready to manage the liquidity risk caused by participants' or other entities' financial or operational problems. Among other things, the clearing agency should have the operational capacity to reroute payments, where feasible, on a timely basis in case of problems with a correspondent bank.

The clearing agency may employ other risk-management tools to manage its or, where relevant, its participants' liquidity risk. To mitigate and manage liquidity risk stemming from a participant default, the clearing agency could use, either individually or in combination, exposure limits, collateral requirements, and prefunded default arrangements. To mitigate and manage liquidity risks from the late-day submission of payments or other transactions, the clearing agency could adopt rules or financial incentives for timely submission. To mitigate and manage liquidity risk stemming from a service provider or a linked clearing agency, the clearing agency could use, individually or in combination, selection criteria, concentration or exposure limits, and collateral requirements. For example, the clearing agency should seek to manage or diversify its settlement flows and liquid resources to avoid excessive intraday or overnight exposure to one entity. This, however, may involve trade-offs between the efficiency of relying on an entity and the risks of being overly dependent on that entity. These tools are often also used by a clearing agency to manage its credit risk.

– ***Measuring and monitoring liquidity risk***

(4) Pursuant to subsection 3.7(4) of the Rule, the clearing agency should, in particular, understand and assess the value and concentration of its daily settlement and funding flows through its settlement banks, nostro agents, and other intermediaries. The clearing agency should also be able to monitor on a daily basis the level of liquid assets (such as cash, securities, other assets held in custody, and investments) that it holds. The clearing agency should be able to determine the value of its available liquid assets, taking into account the appropriate haircuts on those assets. Where appropriate, the clearing agency should provide sufficient information and analytical tools to help its participants measure and monitor their liquidity risks in the clearing agency.

If the clearing agency maintains prearranged funding arrangements, it should also identify, measure, and monitor its liquidity risk from the liquidity providers of those arrangements. The clearing agency should obtain a high degree of confidence through rigorous due diligence that each liquidity provider, whether or not it is a participant in the clearing agency, would have the capacity to perform as required under the liquidity arrangement and is subject to commensurate regulation, supervision, or oversight of its liquidity risk-management requirements. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, the liquidity provider's potential access to credit from the relevant central bank may be taken into account.

– ***Maintaining sufficient liquid resources***

(5) If the clearing agency performs the services of an SSS (including one that employs a DNS mechanism), it should ensure that it has sufficient liquid resources, as determined by regular and rigorous stress testing, to effect settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios. The SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day 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. In some instances, the SSS may need to have sufficient liquid resources to effect settlement of payment obligations over multiple days to account for any potential liquidation of collateral that is outlined in the clearing agency's participant-default procedures.

(6) Similarly, if the clearing agency acts as a CCP, it should maintain sufficient liquid resources in all relevant currencies to settle securities-related payment obligations, 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. The CCP should carefully analyse its liquidity needs, and the analysis is expected to be reviewed by the relevant authorities. In many cases, the CCP may need to maintain sufficient liquid resources to meet payments to settle required margin and other payment obligations over multiple days to account for multiday hedging and close-out activities as directed by the CCP's participant-default procedures.

(7) Subsection 3.7(7) of the Rule provides the added requirement that if the clearing agency, which acts as a CCP, is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions, it must maintain 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.

The Commission will consider the factors discussed in subsection 3.4(5) of this CP in determining whether the clearing agency is involved in activities with a more complex risk profile or is systemically important in multiple jurisdictions.

– ***Qualifying liquid resources***

(8) For the purpose of meeting the requirements to maintain sufficient liquid resources, the clearing agency's qualifying liquid resources in each currency may include only those listed in subsection 3.7(8) of the Rule. All such resources should be available when needed. However, such access does not eliminate the need for sound risk-management practices and adequate access to private-sector liquidity resources.

– ***Other liquid resources***

(10) The clearing agency may supplement its qualifying liquid resources with other forms of liquid resources. If the clearing agency does so, then these liquid resources must be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repurchase agreements ("repos") on an ad hoc basis following a default, even if this saleability or acceptability as collateral cannot be reliably prearranged or guaranteed in extreme market conditions. The clearing agency may consider using such resources within its liquidity risk management framework in advance of, or in addition to, using its qualifying liquid resources. This may be particularly beneficial where liquidity needs exceed qualifying liquid resources, where qualifying liquid resources can be preserved to cover a future default, or where using other liquid resources would cause less liquidity dislocation to the clearing agency's participants and the financial system as a whole. Even if the clearing agency does not have access to routine central bank credit, it should take account of what collateral is typically accepted by the relevant central bank of issue, as such assets may be more likely to be liquid in stressed circumstances. In any case, the clearing agency should not assume the availability of emergency central bank credit as a part of its liquidity plan, as is specified under subsection 3.7(11) of the Rule.

– ***Due diligence of liquidity providers***

(12) Under subsection 3.7(12) of the Rule, if the clearing agency has prearranged funding arrangements, it must obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources 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. Additionally, the clearing agency should adequately plan for the renewal of prearranged funding arrangements with liquidity providers in advance of their expiration.

(14) Under subsection 3.7(14) of the Rule, the clearing agency is required to regularly test its procedures for accessing its liquid resources at a liquidity provider, including by activating and drawing down test amounts from committed credit facilities and by testing operational procedures for conducting same-day repos.

In addition, the clearing agency should have detailed procedures for using its liquid resources to complete settlement during a liquidity shortfall. The clearing agency's procedures should clearly document the sequence for using each type of liquid resource (for example, the use of certain assets before prearranged funding arrangements). These procedures may include instructions for accessing cash deposits or overnight investments of cash deposits, executing same-day market transactions, or drawing on prearranged liquidity lines.

– ***Central bank services***

(15) If the clearing agency has access to central bank accounts, payment services, securities services, or collateral management services, it is required under subsection 3.7(15) to use these services, where practical, to enhance its management of liquidity risk. Cash balances at the central bank of issue, for example, offer the highest liquidity.

– ***Stress testing of liquidity needs and resources***

(16) Under subsection 3.7(16) of the Rule, the clearing agency is required to determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing, and have clear procedures for reporting results and evaluating the adequacy of and adjusting its liquidity risk-management framework.

Further, the clearing agency should conduct, as appropriate, reverse stress tests aimed at identifying the extreme default scenarios and extreme market conditions for which the clearing agency's liquid resources would be insufficient. In other words, these tests identify how severe stress conditions would be covered by the clearing agency's liquid resources. The clearing agency should assess whether it would be prudent to prepare for these severe conditions and various combinations of factors influencing these conditions. Reverse stress tests require the clearing agency to model extreme market conditions that may go beyond what are considered extreme but plausible market conditions in order to help understand the sufficiency of liquid resources given the underlying assumptions modelled. Modelling extreme market conditions can help the clearing agency determine the limits of its current model and resources; however, it requires exercising judgment when modelling different markets and products. The clearing agency should develop hypothetical extreme scenarios and market conditions tailored to the specific risks of the markets and of the products it serves. Reverse stress tests should be considered a helpful risk-management tool but they need not, necessarily, drive the clearing agency's determination of the appropriate level of liquid resources.

Liquidity stress testing should be performed on a daily basis using standard and predetermined parameters and assumptions. In addition, on at least a monthly basis, the clearing agency should perform a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for achieving the clearing agency's identified liquidity needs and resources in light of current and evolving market conditions. The clearing agency should perform stress testing more frequently when markets are unusually volatile, when they are less liquid, or when the size or concentration of positions held by its participants increases significantly. A full validation of the clearing agency's liquidity risk-management model should be performed at least annually.

– ***Contingency planning for uncovered liquidity shortfalls***

(20) In certain extreme circumstances, the liquid resources of the clearing agency or its participants may not be sufficient to meet the payment obligations of the clearing agency to its participants or the payment obligations of participants to each other within the clearing agency. In a stressed environment, for example, normally liquid assets held by the clearing agency may not be sufficiently liquid to obtain same-day funding, or the liquidation period may be longer than expected. In this regard, the contingency planning requirements of subsection 3.7(20) of the Rule apply. Under subsection 3.7(20) of the Rule, the clearing agency is required to establish explicit rules and procedures that enable it 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 clearing agency'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.

If the clearing agency allocates potentially uncovered liquidity shortfalls to its participants, it should have clear and transparent rules and procedures for the allocation of shortfalls. These procedures could involve a funding arrangement between the clearing agency and its participants, the mutualization of shortfalls among participants according to a clear and transparent formula, or the use of liquidity rationing (for example, reductions in payouts to participants). Any allocation rule or procedure must be discussed thoroughly with and communicated clearly to participants, as well as be consistent with participants' respective regulatory liquidity risk-management requirements. Furthermore, the clearing agency should consider and validate, through simulations and other techniques and through discussions with each participant, the potential impact on each participant of any such same-day allocation of liquidity risk and each participant's ability to bear proposed liquidity allocations.

Settlement finality

– ***General principle***

3.8 (1) A clearing agency should be designed to provide clear and certain final settlement of payments, transfer instructions, or other obligations. Under subsection 3.8(1) of the Rule, a payment, transfer instruction, or other obligation that a recognized clearing agency (which acts as, or performs the services of a CCP or SSS) accepts for settlement in accordance with its rules and procedures must therefore be settled with finality no later than the end of the intended value date, as further required under subsection 3.8(3) of the Rule. "Final settlement" is a legal defined moment, and refers to the irrevocable and unconditional transfer of an asset or financial instrument, or the discharge of an obligation by the clearing agency or its participants in accordance with the terms of the underlying contract. As defined in s. 1.1 of the Rule, the "value date" refers to the day on which the payment, transfer instruction, or other obligation is due and the associated funds and securities are typically available to the receiving participant in a trade or other transaction. Completing final settlement by the end of the value date is important because deferring final settlement to the next-business day can create both credit and liquidity pressures for the clearing agency's participants and other stakeholders, and potentially be a source of systemic risk. A clear definition of when settlements are final also greatly assists in a resolution scenario such that the positions of the participant in resolution and other affected parties can be quickly ascertained.

(2) Depending on the type of obligations that the clearing agency settles, the use of intraday settlement, either in multiple batches or in real time, may be necessary or desirable to reduce settlement risk. As such, some types of clearing agencies should consider adopting real time gross settlement ("RTGS") or multiple-batch settlement to complete final settlement intraday. RTGS is the real-time settlement of payments, transfer instructions, or other obligations individually on a transaction-by-transaction basis. Batch settlement is the settlement of groups of payments, transfer instructions, or other obligations together at one or more discrete, often pre-specified times during the processing day. With batch settlement, the time between the acceptance and final settlement of transactions should be kept short. To speed up settlements, the clearing agency should encourage its participants to submit transactions promptly. To validate the finality of settlement, the clearing agency also should inform its participants of their final account balances and, where practical, settlement date and time as quickly as possible, preferably in real time.

– ***Final settlement***

(3) Under subsection 3.8(3) of the Rule, the clearing agency is required to define the point at which settlement is final. The clearing agency's legal framework and rules should generally determine the finality of settlement. The legal basis governing the clearing agency, including the insolvency law, must acknowledge the discharge of a payment, transfer instruction, or other obligation between the clearing agency and system participants, or between or among participants, for the transaction to be considered final. The clearing agency should take reasonable steps to confirm the effectiveness of cross-border recognition and protection of cross-system settlement finality, especially when it is developing plans for recovery or orderly wind-down or providing relevant authorities information relating to its resolvability. Because of the complexity of legal frameworks and system rules, particularly in the context of cross-border settlement where legal frameworks are not harmonized, a well-reasoned legal opinion is generally necessary to establish the point at which finality takes place.

As required by subsection 3.8(1), the clearing agency's processes must be designed to complete final settlement, at a minimum no later than the end of the value date. This means that any payment, transfer instruction, or other obligation that has been submitted to and accepted by the clearing agency in accordance with its risk management and other relevant acceptance criteria should be settled on the intended value date. If the clearing agency is not designed to provide final settlement on the value date (or same-day settlement), it would not satisfy section 3.8 of the Rule, even if the transaction's settlement date is adjusted back to the value date after settlement. This is because, in most of such arrangements, there is no certainty that final settlement will occur on the value date as expected. Further, deferral of final settlement to the next-business day can entail overnight risk exposures. For example, if an SSS or CCP conducts its money settlements using instruments or arrangements that involve next-day settlement, a participant's default on its settlement obligations between the initiation and finality of settlement could pose significant credit and liquidity risks to the clearing agency and its other participants.

Subsection 3.8(3) also requires the clearing agency to clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant. In general, the clearing agency should prohibit the unilateral revocation of accepted and unsettled payments, transfer instructions, or other obligations after a certain point or time in the settlement day, so as to avoid creating liquidity risks. In all cases, cutoff times and materiality rules for exceptions should be clearly defined. The rules should make clear that changes to operating hours are exceptional and require individual justifications. For example, the clearing agency may want to permit extensions for reasons connected with the implementation of monetary policy or widespread financial market disruption. If extensions are allowed for participants with operating problems to complete processing, the rules governing the approval and duration of such extensions should be clear to participants.

Money settlements

– ***General principle***

3.9 (1) A clearing agency typically needs to conduct money settlements with or between its participants for a variety of purposes. To conduct such money settlements, a clearing agency might use central bank money or commercial bank money, or a combination of both. Refer to subsection 1.1 of the Rule for definitions of "central bank money" and "commercial bank money". Subsection 3.9(1) of the Rule requires a recognized clearing that acts as, or performs the services of a CCP or SSS to conduct its money settlements using central bank money, where practical and available, to avoid credit and liquidity risks.

Credit risk may arise when a settlement bank has the potential to default on its obligations (for example, if the settlement bank becomes insolvent). Liquidity risk may arise in money settlements if, after a payment obligation has been settled, participants or the clearing agency itself are unable to transfer readily their assets at the settlement bank into other liquid assets, such as claims on a central bank. The requirement under subsection 3.9(1) of the Rule thus arises given that central banks have the lowest credit risk and are the source of liquidity with regard to their currency of issue. Indeed, one of the fundamental purposes of central banks is to provide a safe and liquid settlement asset. With the use of central bank money, a payment obligation is typically discharged by providing the clearing agency or its participants with a direct claim on the central bank, that is, the settlement asset is central bank money.

(2) The use of central bank money, however, may not always be practical or available. For example, the clearing agency or its participants may not have direct access to all relevant central bank accounts and payment services. Further, a multicurrency clearing agency that has access to all relevant central bank accounts and payment services may find that some central bank payment services do not operate, or provide finality, at the times when it needs to make money settlements. In this regard, the use of commercial bank money may be a necessity.

Pursuant to subsection 3.9(2), where central bank money is not used, the clearing agency must conduct its money settlements using a settlement asset with little or no credit or liquidity risk. The use of commercial bank money (or a combination of central bank and commercial bank monies) to settle payment obligations, however, can create additional credit and liquidity risks for the clearing agency and its participants. Accordingly, the clearing agency must minimize and strictly control the credit and liquidity risks arising from the use of commercial bank money, as further described in subsections 3.9(3) and (4).

Settlement in commercial bank money typically occurs on the books of a commercial bank. In this model, a clearing agency establishes an account with one or more commercial settlement banks and requires each of its participants to establish an account with one of them. In some cases, the clearing agency itself can serve as the settlement bank. Money settlements are then effected through accounts on the books of the clearing agency

– ***Commercial bank money***

(3) (a) Where commercial bank money is used in lieu of central bank money, paragraph 3.9(3)(a) of the Rule requires that the clearing agency monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement bank. For example, the clearing agency should limit both the probability of being exposed to a commercial settlement bank's failure and limit the potential losses and liquidity pressures to which it would be exposed in the event of such a failure. The clearing agency should establish and monitor adherence to strict criteria for its commercial settlement banks that take into account, among other things, their regulation and supervision, creditworthiness, capitalization, access to liquidity, and operational reliability.

(b) In addition, the clearing agency should take steps to limit its credit exposures and liquidity pressures by diversifying the risk of a commercial settlement bank failure, where reasonable, through use of multiple commercial settlement banks. The clearing agency must monitor and manage the full range and concentration of exposures to its commercial settlement banks and assess its potential losses and liquidity pressures as well as those of its participants in the event that the commercial settlement bank with the largest share of activity were to fail.

– ***Settlement on books of clearing agency***

(5) Settlement in commercial bank money typically occurs on the books of a commercial bank. In this model, a clearing agency will typically establish an account with one or more commercial settlement banks and requires each of its participants to establish an account with one of them. In some cases, the clearing agency itself can serve as the settlement bank. Money settlements are then effected through accounts on the books of the clearing agency. Where money settlement does not occur in central bank money and the clearing agency conducts money settlements on its own books, subsection 3.9(5) of the Rule requires that it minimize and strictly control its credit and liquidity risks. In such an arrangement, the clearing agency offers cash accounts to its participants, and a payment or settlement obligation is discharged by providing the clearing agency's participants with a direct claim on the clearing agency itself. The credit and liquidity risks associated with a claim on the clearing agency are therefore directly related to its overall credit and liquidity risks. One way the clearing agency could minimize these risks is to limit its activities and operations to clearing and settlement and closely related processes. Further, to settle payment obligations, the clearing agency could limit the provision of cash accounts to only participants. In some cases, the clearing agency can further mitigate risk by having participants fund and defund their cash accounts at the clearing agency using central bank money. In such an arrangement, the clearing agency is able to back the settlements conducted on its own books with balances that it holds in its account at the central bank.

– ***Finality of funds transfers between settlement accounts***

(6) In settlements involving either central bank or commercial bank money, a critical issue is the timing of the finality of funds transfers. These transfers should be final when effected. To this end, the clearing agency's legal agreements with any commercial 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 clearing agency and its participants to manage credit and liquidity risks. If the clearing agency conducts intraday money settlements (for example, to collect intraday margin), the arrangement should provide real-time finality or intraday finality at the times when the clearing agency wishes to effect money settlement.

Physical deliveries

– ***General principle***

3.10 (1) Where a recognized clearing agency settles transactions using physical delivery, which is the delivery of an asset, such as an instrument or a commodity in physical form, paragraph 3.10(1)(a) of the Rule requires that the clearing agency have rules and procedures that clearly state its obligations with respect to the delivery of those physical instruments or commodities. The obligations that the clearing agency may assume with respect to physical deliveries vary based on the types of assets that it settles. In this regard, the clearing agency should clearly state which asset classes it accepts for physical delivery and the procedures surrounding the delivery of each. As well, it should be clearly stated whether the clearing agency's obligation is to make or receive physical deliveries or to indemnify participants for losses incurred in the delivery process.

In addition, the clearing agency is required under paragraph 3.10(1)(b) of the Rule to identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments and commodities. Issues relating to delivery may arise, for example, when a derivatives contract requires physical delivery of an underlying instrument or commodity. The clearing agency should plan for and manage physical deliveries by establishing definitions for acceptable physical instruments or commodities, the appropriateness of alternative delivery locations or assets, rules for warehouse operations, and the timing of delivery, when relevant. If the clearing agency is responsible for the warehousing and transportation of a commodity, it should make arrangements that take into account the commodity's particular characteristics (for example, storage under specific conditions, such as an appropriate temperature and humidity for perishables).

Further, the clearing agency should have appropriate processes, procedures, and controls to manage the risks of storing and delivering physical assets, such as the risk of theft, loss, counterfeiting, or deterioration of assets. The clearing agency's policies and procedures should ensure that its record of physical assets accurately reflects its holdings of assets, for example, by separating duties between handling physical assets and maintaining records. The clearing agency should also have appropriate employment policies and procedures for personnel that handle physical assets and should include appropriate pre-employment checks and training. As well, the clearing agency should consider other measures, such as insurance coverage and random storage facility audits, to mitigate its storage and delivery risks (other than principal risk).

In some instances, clearing agencies serving a commodity market can reduce its risks associated with the physical storage and delivery of commodities by matching participants that have delivery obligations with those due to receive the commodities, thereby removing itself from direct involvement in the storage and delivery process. In such instances, the legal obligations for delivery should be clearly expressed in the rules, including default rules, and any related agreements. In particular, it should be clear whether the receiving participant should seek compensation from the clearing agency or the delivering participant in the event of a loss. Additionally, the clearing agency holding margin should not release the margin of the matched participants until it confirms that both have fulfilled their respective obligations. The clearing agency should also monitor its participants' performance and, to the extent practicable, ensure that its participants have the necessary systems and resources to be able to fulfil their physical delivery obligations.

Central securities depositories

– ***General principle***

3.11 (1) (a) In general, a CSD is an entity that provides securities accounts and, in many countries, performs the services of an SSS. A CSD also provides central safekeeping and asset services, which may include the administration of corporate actions and redemptions, and plays an important role in helping to ensure the integrity of securities issues. See the definition of CSD under s. 1.1 of the Rule. Under paragraph 3.11(1)(a) of the Rule, where a recognized clearing agency acts as a CSD, it must have clear and comprehensive rules, procedures and controls to ensure that the securities it holds on behalf of its participants are appropriately accounted for on its books and protected from risks, including those associated with the other services that the CSD may provide.

(b) Securities can be held at a CSD either in physical (but immobilized) form or in dematerialized form (that is, as electronic records). Securities held in physical form may be transferred via physical delivery or immobilized and transferred via book entry. Book entry refers to the transfer of securities or other financial assets without physical movement of paper documents or certificates. The safekeeping and transferring of securities in physical form, however, creates additional risks and costs, such as the risk of destruction or theft of certificates, increased processing costs, and increased time to clear and settle securities transactions. By immobilizing securities and transferring them via book entry, a CSD can improve efficiency through increased automation and reduce the risk of errors and delays in processing. Dematerializing securities also eliminates the risk of destruction or theft of certificates. Under paragraph 3.11(1)(b), the CSD is therefore required to maintain securities in an immobilized or dematerialized form for their transfer by book entry. To facilitate the immobilization of all physical securities of a particular issue, a global note representing the whole issue can be issued. In certain cases, however, immobilization or dematerialization within a CSD may not be legally possible or practicable. In such cases, the CSD should provide incentives to immobilize or dematerialize securities.

– ***Safeguarding integrity of securities issuers***

(2) The preservation of the rights of issuers and holders of securities is essential for the orderly functioning of a securities market. Therefore, subsection 3.11(2) of the Rule requires the CSD to (a) safeguard the rights of securities issuers and holders, (b) prevent the unauthorized creation or deletion of securities, and (c) conduct periodic and at least daily reconciliation of the securities issues that it maintains, in order to ensure that the securities it holds on behalf of its participants are appropriately accounted for on its books and protected from risks associated with the other services that the CSD may provide. The CSD should, in particular, maintain robust accounting practices and perform end-to-end auditing to verify that its records are accurate and provide a complete accounting of its securities issues. If the CSD records the issuance of securities (alone or in conjunction with other entities), it should verify and account for the initial issuance of securities and ensure that newly issued securities are delivered in a timely manner. To further safeguard the integrity of the securities issues, the CSD is required to conduct periodic and at least daily reconciliation of the totals of securities issues in the CSD for each issuer (or its issuing agent), and ensure that the total number of securities recorded in the CSD for a particular issue is equal to the amount of securities of that issue held on its books. Reconciliation may require coordination with other entities if the CSD does not (or does not exclusively) record the issuance of the security or is not the official registrar of the security. For instance, if the issuer (or its issuing agent) is the only entity that can verify the total amount of an individual issue, it is important that the CSD and the issuer cooperate closely to ensure that the securities in circulation in a system correspond to the volume issued into that system. If the CSD is not the official securities registrar for the securities issuer, reconciliation with the official securities registrar should be required. Finally, the CSD is required to (d) prohibit overdrafts and debit balances in securities accounts to avoid credit risk and reduce the potential for the creation of securities. If the CSD were to allow overdrafts or a debit balance in a participant's securities account in order to credit another participant's securities account, it would effectively be creating securities and would affect the integrity of the securities issue.

– ***Protection of assets***

(3) Subsection 3.11(3) requires that the CSD protect assets against custody risk, including the risk of loss because of negligence, misuse of assets, fraud, poor administration, inadequate recordkeeping, or failure to protect a participant's interests in securities or because of the CSD's insolvency or claims by its creditors. The CSD should have rules and procedures consistent with its legal framework and robust internal controls to achieve these objectives. Where appropriate, it should consider insurance or other compensation schemes to protect participants against misappropriation, destruction, and theft of securities.

(4) Moreover, the CSD must employ a robust system that ensures segregation between its own assets and the securities of its participants, and segregation among the securities of participants through the provision of separate accounts. While the title to securities is typically held in a CSD, often the beneficial owner, or the owner depending on the legal framework, of the securities does not participate directly in the system. Rather, the owner establishes relationships with CSD participants (or other intermediaries) that provide safekeeping and administrative services related to the holding and transfer of securities on behalf of customers. Where supported by the legal framework, the CSD must also support operationally the segregation of securities belonging to a participant's customers on the participant's books and facilitate the transfer of customer holdings to another participant. Where relevant, the segregation of accounts typically helps provide appropriate protection against the claims of a CSD's creditors or the claims of the creditors of a participant in the event of its insolvency.

– ***Other activities***

(5) If the CSD provides services other than central safekeeping and administration of securities, it must identify, measure, monitor, and manage the risks associated with those activities, particularly credit and liquidity risks, consistent with the respective requirements of the Rule. Additional tools may be necessary to address these risks, including the need for the CSD to separate legally the other activities. For example, a CSD that performs the services of an SSS may provide a centralized securities lending facility to help facilitate timely settlement and reduce settlement fails or may otherwise offer services that support the bilateral securities lending market. If the CSD acts as a principal in a securities lending transaction, it should identify, monitor, and manage its risks, including potential credit and liquidity risks. For example, the securities lent by the CSD may not be returned when needed because of a counterparty default, operational failure, or legal challenge. The CSD would then need to acquire the lent securities in the market, perhaps at a cost, thus exposing the CSD to credit and liquidity risks.

Exchange-of-value settlement systems

– *General principle*

3.12 (1) The settlement of a financial transaction by a recognized clearing agency may involve the settlement of two linked obligations, such as the delivery of securities against payment of cash or securities or the delivery of one currency against delivery of another currency. In this context, principal risk – the risk that a counterparty will lose the full value involved in a transaction, such as the risk that a seller of a financial asset will irrevocably deliver the asset but not receive payment – may be created when one obligation is settled, but the other obligation is not. Under subsection 3.12(1) of the Rule, principle risk must be eliminated by clearing agencies that act as, or perform the services of a CCP or SSS which settle transactions that involve the settlement of two linked obligations through the use of a delivery versus payment (DvP),[11] delivery versus delivery (DvD),[12] or payment versus payment (PvP)[13] settlement mechanism. These mechanisms ensure 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 clearing agency settles on a gross or net basis and when finality occurs.

The final settlement of two linked obligations can be achieved either on a gross basis or on a net basis. For example, an SSS can settle the transfers of both securities and funds on a gross basis throughout the settlement day. Alternatively, an SSS can settle securities transfers on a gross basis throughout the day but settle funds transfers on a net basis at the end of the day or at certain times during the day. An SSS can also settle both securities and funds transfers on a net basis at the end of the day or at certain times during the day. Regardless of whether the clearing agency settles on a gross or net basis, the legal, contractual, technical, and risk-management framework should ensure that the settlement of an obligation is final if and only if the settlement of the corresponding obligation is final.

DvP, DvD, and PvP can be achieved through different timing arrangements. Strictly speaking, DvP, DvD, and PvP do not require a simultaneous settlement of obligations. In some cases, settlement of one obligation could follow the settlement of the other. For example, when a SSS does not itself provide cash accounts for settlement, it may first block the underlying securities in the account of the seller. The system may then request a transfer of funds from the buyer to the seller at the settlement bank for funds transfers. The securities are delivered to the buyer or its custodian if and only if the system receives confirmation of settlement of the cash leg from the settlement bank. In such DvP arrangements, however, the length of time between the blocking of securities, the settling of cash, and the subsequent release and delivery of the blocked securities should be minimised. Further, blocked securities must not be subject to a claim by a third party (for example, other creditors, tax authorities, or even the system itself) because these claims would give rise to principal risk.

Participant default rules and procedures

– *General principle*

3.13 (1) Participant-default rules and procedures facilitate the continued functioning of a clearing agency in the event that a participant fails to meet its obligations. These rules and procedures help limit the potential for the effects of a participant's failure to spread to other participants and undermine the viability of the clearing agency. Under subsections 3.13(1) and (2) of the Rule, a recognized clearing agency is required to have default rules and procedures that enable it to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default. The clearing agency should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules. Key objectives of default rules and procedures should include (i) ensuring timely completion of settlement, even in extreme but plausible market conditions; (ii) minimizing losses for the clearing agency and for non-defaulting participants; (iii) limiting disruptions to the market; (iv) providing a clear framework for accessing clearing agency liquidity facilities as needed; and (v) managing and closing out the defaulting participant's positions and liquidating any applicable collateral in a prudent and orderly manner.

In some instances, managing a participant default may involve hedging open positions, funding collateral so that the positions can be closed out over time, or both. The clearing agency may also decide to auction or allocate open positions to its participants. To the extent consistent with these objectives, the clearing agency should allow non-defaulting participants to continue to manage their positions as normal.

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11 "Delivery versus payment" is defined in the PFMI Report as "a securities settlement mechanism that links a securities transfer and a funds transfer in such a way as to ensure that delivery occurs if and only if the corresponding payment occurs".

12 "Delivery versus delivery" is defined in the PFMI Report as "a securities settlement mechanism that links two securities transfers in such a way as to ensure that delivery of one security occurs if and only if the corresponding delivery of the other security occurs".

13 "Payment versus payment" is defined in the PFMI Report as "a settlement mechanism that ensures that the final transfer of a payment in one currency occurs if and only if the final transfer of a payment in another currency or currencies takes place".

– ***Use and sequencing of financial resources***

(3) The clearing agency's default rules and procedures should enable it to take timely action to contain losses and liquidity pressures, before, at, and after the point of participant default. Accordingly, the clearing agency's rules and procedures must allow the prompt use of any financial resources that it maintains for covering losses and containing liquidity pressures arising from default, including liquidity facilities, in a specified order. This information enables participants to assess their potential future exposures from using the clearing agency's services. Typically, the clearing agency should first use assets provided by the defaulting participant, such as margin or other collateral, to provide incentives for participants to manage prudently the risks, particularly credit risk, they pose to the clearing agency. The application of previously provided collateral should not be subject to prevention, stay, or reversal under applicable law and the rules of the clearing agency. The clearing agency should also have a credible and explicit plan for replenishing its resources over an appropriate time horizon following a participant default so that it can continue to operate in a safe and sound manner. In particular, its rules and procedures should define the obligations of the non-defaulting participants to replenish the financial resources depleted during a default so that the time horizon of such replenishment is anticipated by non-defaulting participants without any disruptive effects.

– ***Default rules and procedures***

(4) Further to subsections 3.13(1) to (3) of the Rule, under subsection 3.13(4) of the Rule, the clearing agency is required to clearly describe the items listed, in its default rules and procedures. These elements of the default rules and procedures will enable the clearing agency to continue to meet its obligations to non-defaulting participants in the event of a participant default. The clearing agency should involve its participants, relevant authorities, and other relevant stakeholders in developing its default rules and procedures.

In addition, if the clearing agency acts as a CCP, it should have rules and procedures to facilitate the prompt close out or transfer of a defaulting participant's proprietary and customer positions. Typically, the longer these positions remain open on the books of the CCP, the larger the CCP's potential credit exposures resulting from changes in market prices or other factors will be. The CCP should have the ability to apply the proceeds of liquidation, along with other funds and assets of the defaulting participant, to meet the defaulting participant's obligations. It is critical that the CCP has the authority to act promptly to contain its exposure, while having regard for overall market effects, such as sharp declines in market prices. The CCP should have the information, resources, and tools to close out positions promptly. In circumstances where prompt close out is not practicable, the CCP should have the tools to hedge positions as an interim risk-management technique. In some cases, the CCP may use seconded personnel from non-defaulting participants to assist in the close-out or hedging process. The CCP's rules and procedures should clearly state the scope of duties and term of service expected from seconded personnel. In other cases, the CCP may elect to auction positions or portfolios to the market. The CCP's rules and procedures should clearly state the scope for such action, and any participant obligations with regard to such auctions should be clearly set out. The close out of positions should not be subject to prevention, stay, or reversal under applicable law and the rules of the clearing agency.

In general, the clearing agency should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in the rules. Management should ensure that the clearing agency has the operational capacity, including sufficient well-trained personnel, to implement its procedures in a timely manner. The clearing agency's rules and procedures should outline examples of when management discretion may be appropriate and should include arrangements to minimise any potential conflicts of interests. Management should also have internal plans that clearly delineate the roles and responsibilities for addressing a default and provide training and guidance to its personnel on how the procedures should be implemented. These plans should address documentation, information needs, and coordination when more than one clearing agency or authority is involved. In addition, timely communication with stakeholders, in particular with relevant authorities, is of critical importance. The clearing agency, to the extent permitted, should clearly convey to affected stakeholders information that would help them to manage their own risks. The internal plan should be reviewed by management and the relevant board committees at least annually or after any significant changes to the clearing agency's arrangements.

(5) To provide certainty and predictability regarding the measures that a clearing agency may take in a default event, a recognized clearing agency is required under subsection 3.13(5) of the Rule to publicly disclose on its Website key aspects of its default rules and procedures. This disclosure should include: (i) the circumstances in which action may be taken; (ii) who may take those actions; (iii) the scope of the actions which may be taken, including the treatment of both proprietary and customer positions, funds, and other assets; (iv) the mechanisms to address the clearing agency's obligations to non-defaulting participants; and (v) where direct relationships exist with participants' customers, the mechanisms to help address the defaulting participant's obligations to its customers. This transparency fosters the orderly handling of defaults, enables participants to understand their obligations to the clearing agency and to their customers, and gives market participants the information they need to make informed decisions about their activities in the market. The clearing agency should ensure that its participants and their customers, as well as the public, have appropriate access to the default rules and procedures and should promote their understanding of those procedures in order to foster confidence in the market.

– *Testing of default procedures*

(6) Under subsections 3.13(6) and (7) of the Rule, the clearing agency is required to involve its participants and other stakeholders in the testing and review of its default rules and procedures, including any close-out procedures. The testing and review must be conducted at least annually or following material changes to the clearing agency's default rules and procedures. The periodic testing and review of default procedures is important to help the clearing agency and its participants understand fully the rules and procedures and to identify any lack of clarity in, or discretion allowed by, the rules and procedures. Such tests should include all relevant parties, or an appropriate subset, that would likely be involved in the default procedures, such as members of the appropriate board committees, participants, linked or interdependent clearing agencies, relevant authorities, and any related service providers. This is particularly important where the clearing agency relies on non-defaulting participants or third parties to assist in the close-out process and where the default rules and procedures have never been tested by an actual default. The results of these tests and reviews should be shared with the clearing agency's board of directors, risk committee, and relevant authorities.

Furthermore, part of the clearing agency's participant-default testing should facilitate the implementation of a resolution regime for its participants, as relevant. The clearing agency should be able to take appropriate steps to assist the resolution process of a participant; specifically, the clearing agency, or if applicable a resolution authority, should be able to transfer a defaulting participant's open positions and customer accounts to a receiver, third party, or bridge financial company.

– *Use of own capital*

(8) Under subsection 3.13(8) of the Rule, in applying its "waterfall" of prefunded financial resources in a default situation, the CCP is required to include a reasonable portion of its own capital to cover losses resulting from one or more participant defaults, prior to applying the collateral of the non-defaulting participants (i.e. a "skin-in-the-game" requirement). The Commission is of the view that a CCP should be required to participate in the default waterfall with its own capital contribution, to be used immediately after a defaulting participant's contribution and prior to non-defaulting participants' contributions. Such equity should be in reasonable proportion to the size of the CCP's default fund.

Segregation and portability

– *General principle*

3.14 (1) Segregation refers to a method of protecting customer collateral and contractual positions by holding or accounting for them separately. Effective segregation arrangements can reduce the impact of a participant's insolvency on its customers by providing for clear and reliable identification of a participant's customer's positions and related collateral. Segregation also protects a customer's collateral from becoming lost to a participant's other creditors. In addition, segregation facilitates the transfer of customers' positions and collateral. Even if no transfers take place, segregation can improve a customer's ability to identify and recover its collateral (or the value thereof), which, at least to some extent, contributes to retaining customers' confidence in their clearing participants and may reduce the potential for "counterparty runs" on a deteriorating clearing participant.

Portability refers to the operational aspects of the transfer of contractual positions, funds, or securities from one party to another party. By facilitating transfers from one participant to another, effective portability arrangements lessen the need for closing out positions, including during times of market stress. Portability thus minimizes the costs and potential market disruption associated with closing out positions and reduces the possible impact on customers' ability to continue to obtain access to central clearing.

Under subsection 3.14(1) to (2) of the Rule, a recognized clearing agency that acts as a CCP must have rules and procedures that provide for the segregation and portability of positions of a participant's customers and the collateral provided to it with respect to those positions. In this regard, customer collateral should be segregated from the assets of the participant through which the customers clear. In addition, individual customer collateral may be held separately from the collateral of other customers of the same participant to protect customers from each other's default. The CCP should also 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 effectively transferred to one or more other participants, taking into account all relevant circumstances.

The PFMI Report notes that in certain jurisdictions, cash market CCPs operate in legal regimes that facilitate segregation and portability to achieve protection of customer assets by alternate means that offer the same degree of protection as the approach required by Principle 14 as adopted in section 3.14. Features of such a regime are that if a participant fails, (i) the customer positions can be identified timely, (ii) customers will be protected by an investor protection scheme designed to move customer accounts from the failed or failing participant to another participant in a timely manner, and (iii) customer assets can be restored. The Commission is currently conducting further policy work on the application of section 3.14 to the CCPs serving the cash markets in Ontario. Accordingly, in cases where it is determined by the Commission that cash market CCPs are operating in a manner, and within a framework, that achieves the same degree of protection and efficiency for customers that would otherwise be achieved by segregation and portability arrangements at the CCP level required by section 3.14, the Commission may provide an exemption from the application of this section.

Where the CCP is clearing derivatives transactions, it will be required to have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to it with respect to those positions, in accordance with the requirements set out in [Rule 91-*** *Model Provincial Rule – Derivatives – Customer Clearing: Protection of Customer Assets*]. See section 1.4(2) for greater clarity on the term "derivative" as well as the interaction of [Model Provincial Rule 91-***] and the Rule.

(4) Under subparagraph 3.14(4)(a)(ii) of the Rule, omnibus customer accounts refers to an account structure where securities or collateral belonging to some or all customers of a particular participant is comingled and held in a single account segregated from that of the participant.

General business risk

– ***General principle***

3.15 (1) General business risk refers to the risks and potential losses arising from a clearing agency's administration and operation as a business enterprise that are neither related to participant default nor separately covered by financial resources under the credit or liquidity risk requirements. General business risk includes any potential impairment of a clearing agency's financial position (as a business concern) as a consequence of a decline in its revenues or an increase in its expenses, such that expenses exceed revenues and result in a loss that must be charged against capital. Such impairment can be caused by a variety of business factors, including poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses. Business-related losses also may arise from risks covered by other principles, for example, legal risk (in the case of legal actions challenging a clearing agency's custody arrangements), investment risk affecting a clearing agency's resources, and operational risk (in the case of fraud, theft, or loss). In these cases, general business risk may cause a clearing agency to experience an extraordinary one-time loss as opposed to recurring losses. Under subsections 3.15(1) and (2) of the Rule, a recognized clearing agency is required to have robust management and control systems to identify, monitor, and manage general business risk. The clearing agency must also 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 the clearing agency should hold must 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. Further specificity to these general principles is also provided under subsection 3.15(3) of the Rule.

As part of the general principles of subsections 3.15(1) and (2), the clearing agency should identify and assess the sources of business risk and their potential impact on its operations and services by taking into account past loss events and financial projections. The clearing agency should assess and thoroughly understand its business risk and the potential effect that this risk could have on its cash flows, liquidity, and capital positions. In doing so, the clearing agency should consider a combination of tools, such as risk management and internal control assessments, scenario analysis, and sensitivity analysis. Internal control assessments should identify key risks and controls and assess the impact and probability of the risks and the effectiveness of the controls. Scenario analysis should examine how specific scenarios would affect the clearing agency. Sensitivity analysis should test how changes in one risk affect the clearing agency's financial standing, for example, conducting the analysis of how the loss of a key customer or service provider might impact its existing business activities. In some cases, the clearing agency may want to consider an independent assessment of specific business risks.

The clearing agency should clearly understand its general business risk profile so that it is able to assess its ability either (a) to avoid, reduce, or transfer specific business risks or (b) to accept and manage those risks. This requires the ongoing identification of risk-mitigation options that the clearing agency may use in response to changes in its business environment. When planning an expansion of activity, the clearing agency should conduct a comprehensive enterprise risk assessment. In particular, when considering any major new product, service, or project, the clearing agency should project potential revenues and expenses as well as identify and plan how it will cover any additional capital requirements. Further, the clearing agency may eliminate or mitigate some risks by instituting appropriate internal controls or by obtaining insurance or indemnity from a third party.

Once the clearing agency has identified and assessed its business risk, it should measure and monitor these risks on an ongoing basis and develop appropriate information systems as part of a robust enterprise risk-management program. Key components of a robust enterprise risk-management program include: establishing strong financial and internal control systems so that the clearing agency can monitor, manage, and control its cash flows and operating expenses and mitigate any business-related losses. In particular, the clearing agency should minimize and mitigate the probability of business-related losses and their impact on its operations across a range of adverse business and market conditions, including the scenario that its viability as a going concern is questioned. The clearing agency should also ensure that it has rigorous and appropriate investment guidelines and monitoring procedures.

– *Determining sufficiency of liquid net assets*

(3) As required by subsections 3.15(1) and (2) of the Rule, a clearing agency must hold a sufficient amount of liquid net assets funded by equity so that it can continue operations and services as a going concern if it incurs general business losses, or for the purposes of an orderly wind-down of its critical operations and services, where necessary. Equity allows the clearing agency to absorb losses and should be permanently available for this purpose. Further to the requirements under paragraphs 3.3(3)(b) to (d) of the Rule, subsection 3.15(3) of the Rule requires the clearing agency to maintain a viable recovery or orderly wind-down plan that is approved by the board of directors, as well as sufficient liquid net assets funded by equity to implement this plan.

A determination of the appropriate amount of liquid net assets funded by equity will depend on the content of the plan and, specifically, on the size of the clearing agency, the scope of its activities, the types of actions included in the plan, and the length of time needed to implement them. The clearing agency should also take into consideration the operational, technological, and legal requirements for participants to establish and move to an alternative arrangement in the event of an orderly wind-down. At a minimum, however, the clearing agency should hold liquid net assets funded by equity equal to at least six months of current operating expenses.

In order to estimate the amount of liquid net assets funded by equity that a particular clearing agency would need, it should regularly analyze and understand how its revenue and operating expenses may change under a variety of adverse business scenarios as well as how it might be affected by extraordinary one-time losses. This analysis should also be performed when a material change to the assumptions underlying the model occurs, either because of changes to the clearing agency's business model or because of external changes. The clearing agency needs to consider not only possible decreases in revenues but also possible increases in operating expenses, as well as the possibility of extraordinary one-time losses, when deciding on the amount of liquid net assets to hold to cover general business risk.

Assets held by the clearing agency to cover risks or losses other than business risk (for example, the financial resources required under the credit and liquidity risk principles) or to cover losses from other business lines that are unrelated to its activities as the clearing agency should not be included when accounting for liquid net assets available to cover business risk. However, equity held under international risk-based capital standards should be included where relevant and appropriate to avoid duplicate capital requirements.

(4) To ensure the adequacy of its own resources, the clearing agency should regularly assess and document its liquid net assets funded by equity relative to its potential business risks.

(5) Under subsection 3.15(5) of the Rule, the clearing agency is required to provide a viable capital plan for maintaining an appropriate level of equity which includes detail regarding how the clearing agency would raise new capital if its equity capital were to fall close to or below the amount needed. This plan must be approved by the board of directors and updated regularly. The clearing agency may also need to consult its participants and others during the development of its plan.

In developing such a capital plan, the clearing agency should consider a number of factors, including its ownership structure and any insured business risks. For example, the clearing agency should determine if and to what extent specific business risks are covered by (i) explicit insurance from a third party or (ii) explicit indemnity agreements from a parent, owners, or participants (for example, general loss-allocation provisions and parent guarantees), which would be realizable within the recovery or orderly wind-down time frame. Given the contingent nature of these resources, the clearing agency should use conservative assumptions when taking them into account for its capital plan. Furthermore, these resources should not be taken into account when assessing the clearing agency's capital adequacy.

Custody and investment risks

– *General principle*

3.16 (1) Custody risk is the risk of loss on assets held in custody in the event of a custodian's (or sub-custodian's) insolvency, negligence, fraud, poor administration, or inadequate recordkeeping. Under subsection 3.16(1) of the Rule, a recognized clearing agency has the responsibility to safeguard its assets, such as cash and securities, as well as the assets that its participants have provided to the clearing agency. Assets that are used by a clearing agency to support its operating funds or capital funds or that have been provided by participants to secure their obligations to the clearing agency should be held at supervised or regulated entities that have strong processes, systems, and credit profiles, including other clearing agencies (for example, CSDs). In addition, assets should generally be held in a manner that assures the clearing agency of prompt access to those assets in the event that it needs to draw on them.

(2) Investment risk refers to the risk of loss faced by a clearing agency when it invests its own or its participants' assets. Under subsection 3.16(2) of the Rule, the clearing agency is required to invest its own and its participants' assets in instruments with minimal credit, market, and liquidity risks, as further specified by subsection 3.16(4) of the Rule.

– *Use of custodians*

(3) (a) The clearing agency is required to mitigate its custody risk by using only supervised or regulated banks or custodians with robust accounting practices, safekeeping procedures, and internal controls that fully protect its own and its participants' assets. It is particularly important that assets held in custody are protected against claims of a custodian's creditors. The custodian should have a sound legal basis supporting its activities, including the segregation of assets. The custodian also should have a strong financial position to be able to sustain losses from operational problems or non-custodial activities.

(b) The clearing agency is required to confirm that its interest or ownership rights in the assets can be enforced and that it can have prompt access to its assets and the assets provided by participants, when required. Timely availability and access should be ensured even if these securities are held in another time zone or jurisdiction. Furthermore, the clearing agency should confirm it has prompt access to the assets in the event of a default of a participant.

(c) The clearing agency is required to evaluate and understand its exposures to its banks and custodians, taking into account the full scope of its relationships with each custodian bank. For example, a financial institution may serve as a custodian bank to the clearing agency as well as a settlement bank and liquidity provider to the clearing agency. The custodian bank also might be a participant in the clearing agency and offer clearing services to other participants. The clearing agency should carefully consider all of its relationships with a particular custodian bank to ensure that its overall risk exposure to an individual custodian remains within acceptable concentration limits. Where feasible, the clearing agency could consider using multiple custodians for the safekeeping of its assets to diversify its exposure to any single custodian. For example, if the clearing agency acts as a CCP, it may want to use one custodian for its margin assets and another custodian for its prefunded default arrangement. Such a CCP, however, may need to balance the benefits of risk diversification against the benefits of pooling resources at one or a small number of custodians. In any event, the clearing agency should monitor the concentration of risk exposures to, and financial condition of, its custodian banks on an ongoing basis.

– *Investment strategy*

(4) Under paragraph 3.16(4)(a) of the Rule, the clearing agency's strategy for investing its own and its participants' assets must be consistent with its overall risk-management strategy and fully disclosed to its participants. When making its investment choices, the clearing agency should not allow pursuit of profit to compromise its financial soundness and liquidity risk management. Paragraph 3.16(4)(c) of the Rule requires that investments be secured by, or be claims on, high-quality obligors to mitigate the credit risk to which the clearing agency is exposed. Also, because the value of the clearing agency's investments may need to be realized quickly, investments are to allow for quick liquidation with little, if any, adverse price effect pursuant to paragraph 3.16(4)(d). For example, the clearing agency could invest in overnight reverse repo agreements backed by liquid securities with low credit risk. The clearing agency should carefully consider its overall credit risk exposures to individual obligors, including other relationships with the obligor that create additional exposures such as an obligor that is also a participant or an affiliate of a participant in the clearing agency. In addition, the clearing agency should not invest participant assets in the participant's own securities or those of its affiliates. If the clearing agency's own resources can be used to cover losses and liquidity pressures resulting from a participant default, the investment of those resources should not compromise the clearing agency's ability to use them when needed.

Operational risks

– *General principle*

3.17 (1) Operational risk is the risk that deficiencies in information systems, internal processes, and personnel or disruptions from external events will result in the reduction, deterioration, or breakdown of services provided by a clearing agency. Operational failures can damage a clearing agency's reputation or perceived reliability, lead to legal consequences, and result in financial losses incurred by the clearing agency, participants, and other parties. In certain cases, operational failures can also be a source of systemic risk. Accordingly, subsection 3.17(1) of the Rule requires that a recognized clearing agency establish a robust framework to manage its operational risks with appropriate systems, policies, procedures, and controls.

As part of the clearing agency's robust risk-management framework under the general principle of section 3.3 of the Rule, the clearing agency should identify the plausible sources of operational risk; deploy appropriate systems; establish appropriate policies, procedures, and controls; set operational reliability objectives; and develop a business continuity plan. The clearing agency should take a holistic approach when establishing its operational risk-management framework.

(2) Under the general principle of subsection 3.17(2) of the Rule, the systems of a recognized clearing agency must be designed to ensure a high degree of security and operational reliability. Accordingly, the clearing agency should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives. As well, the clearing agency is required to have scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.

(3) Under the general principle of subsection 3.17(3) of the Rule, the clearing agency must have a business continuity plan that has clearly stated objectives as well as policies and procedures that allow for the rapid recovery and timely resumption of critical operations following a disruption to a service, including in the event of a wide-scale or major disruption. Business continuity management is a key component of the clearing agency's operational risk-management framework.

– ***Identifying sources of operational risk, operational risk management, and operational reliability***

(4) (a) Paragraph 3.17(4)(a) of the Rule provides greater specificity regarding the need for a robust operational risk management framework which allows the clearing agency to actively identify, monitor, and manage the plausible sources of operational risk and establish clear policies and procedures to address them.

In identifying sources of operational risk, the clearing agency should take into account that operational risk can stem from both internal and external sources. Internal sources of operational risk include inadequate identification or understanding of risks and the controls and procedures needed to limit and manage them, inadequate control of systems and processes, inadequate screening of personnel, and, more generally, inadequate management. External sources of operational risk include the failure of critical service providers or utilities or events affecting a wide metropolitan area such as natural disasters, terrorism, and pandemics. Both internal and external sources of operational risk can lead to a variety of operational failures that include (i) errors or delays in message handling, (ii) miscommunication, (iii) service degradation or interruption, (iv) fraudulent activities by staff, and (v) disclosure of confidential information to unauthorized entities. If the clearing agency provides services in multiple time zones, it may face increased operational risk due to longer operational hours and less downtime for maintenance. The clearing agency should identify all potential single points of failure in its operations. Additionally, the clearing agency should assess the evolving nature of the operational risk it faces on an ongoing basis (for example, pandemics and cyber-attacks), so that it can analyze its potential vulnerabilities and implement appropriate defence mechanisms.

The various sources of operational risk should then be monitored, mitigated and managed, according to clear policies, procedures, and controls. Overall, operational risk management is a continuous process encompassing risk assessment, defining an acceptable tolerance for risk, and implementing risk controls. This process results in the clearing agency accepting, mitigating, or avoiding risks consistent with its operational reliability objectives. The clearing agency's governance arrangements are pertinent to its operational risk-management framework.

To ensure the proper functioning of its risk controls, the clearing agency should have sound internal controls. For example, the clearing agency should have adequate management controls, such as setting operational standards, measuring and reviewing performance, and correcting deficiencies. There are many relevant international, national, and industry-level standards, guidelines, or recommendations that the clearing agency may use in designing its operational risk-management framework. Conformity with commercial standards can help the clearing agency reach its operational objectives. For example, commercial standards exist for information security, business continuity, and project management. The clearing agency should regularly assess the need to integrate the applicable commercial standards into its operational risk-management framework. In addition, the clearing agency should seek to comply with relevant commercial standards in a manner commensurate with the clearing agency's importance and level of interconnectedness.

The clearing agency's operational risk-management framework should include formal change-management and project-management processes to mitigate operational risk arising from modifications to operations, policies, procedures, and controls. Change-management processes should provide mechanisms for preparing, approving, tracking, testing, and implementing all changes to the system. Project-management processes, in the form of policies and procedures, should mitigate the risk of any inadvertent effects on the clearing agency's current or future activities due to an upgrade, expansion, or alteration to its service offerings, especially for major projects. In particular, these policies and procedures should guide the management, documentation, governance, communication, and testing of projects, regardless of whether projects are outsourced or executed in-house.

(b) Under paragraph 3.17(4)(b) of the Rule, the clearing agency's board must explicitly define the roles and responsibilities for addressing operational risk and endorse the clearing agency's operational risk-management framework.

Because the proper performance of the clearing agency's employees is a core aspect of any operational risk-management framework, the clearing agency should employ sufficient, well-qualified personnel. The clearing agency's personnel should be able to operate the system safely and efficiently and consistently follow operational and risk-management procedures during normal and abnormal circumstances. The clearing agency should implement appropriate human resources policies to hire, train, and retain qualified personnel, thereby mitigating the effects of high rates of personnel turnover or key-person risk. Additionally, the clearing agency should have appropriate human resources and risk-management policies to address fraud prevention.

(c) Under paragraph 3.17(4)(c) of the Rule, the clearing agency's systems, policies, procedures and controls, including arrangements with participants, must be periodically, and whenever necessary, tested and reviewed, especially after significant changes occur to the system or a major incident occurs. In order to minimize any effects of the testing on operations, tests should be carried out in a "testing environment." This testing environment should, to the extent possible, replicate the production environment (including the implemented security provisions, in particular, those regarding data confidentiality). Additionally, key elements of the clearing agency's operational risk-management framework should be audited periodically and whenever necessary. In addition to periodic internal audits, external audits may be necessary, depending on the clearing agency's importance and level of interconnectedness. Consistent with the evolving nature of operational risk management, the clearing agency's operational objectives should be periodically reviewed to incorporate new technological and business developments.

(d) Under paragraph 3.17(4)(d) of the Rule, the clearing agency must have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives. These objectives serve as benchmarks for the clearing agency to evaluate its efficiency and effectiveness and evaluate its performance against expectations. These objectives should be designed to promote confidence among the clearing agency's participants. Operational reliability objectives should include the clearing agency's operational performance objectives and committed service-level targets. Operational performance objectives and service-level targets should define both qualitative and quantitative measures of operational performance and should explicitly state the performance standards the clearing agency is intending to meet. The clearing agency should monitor and assess regularly whether the system is meeting its established objectives and service-level targets. The system's performance should be reported regularly to senior management, relevant board committees, participants, and authorities. In addition, the clearing agency's operational objectives should be periodically reviewed to incorporate new technological and business developments.

– *Operational capacity, systems requirements, and incident management*

(5) Under paragraph 3.17(5)(c) of the Rule, the clearing agency is required to develop and maintain an adequate system of internal controls that support the clearing agency's operations and services. As well, the clearing agency is required to develop and maintain adequate information technology general controls. These are the controls which are implemented to support information technology planning, acquisition, development and maintenance, computer operations information systems support, and security. Recognized guides as to what constitutes adequate information technology controls include 'Information Technology Control Guidelines' from the Canadian Institute of Chartered Accountants (CICA) and 'COBIT' from the IT Governance Institute.

As part of its information technology general controls, the clearing agency should have comprehensive physical and information security policies that address all potential vulnerabilities and threats. In particular, the clearing agency should have policies effective in assessing and mitigating vulnerabilities in its physical sites from attacks, intrusions, and natural disasters. The clearing agency should also have sound and robust information security policies, standards, practices, and controls to ensure an appropriate level of confidence and trust in the clearing agency by all stakeholders. These policies, standards, practices, and controls should include the identification, assessment, and management of security threats and vulnerabilities for the purpose of implementing appropriate safeguards into its systems. Data should be protected from loss and leakage, unauthorized access, and other processing risks, such as negligence, fraud, poor administration, and inadequate recordkeeping. The clearing agency's information security objectives and policies should conform to commercially reasonable standards for confidentiality, integrity, authentication, authorization, non-repudiation, availability, and auditability (or accountability).

Under paragraph 3.17(5)(a) of the Rule, the clearing agency is required to ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives. Capacity management requires that the clearing agency monitor, review, and test (including stress test) the actual capacity and performance of the system on an ongoing basis. Accordingly, under paragraph 3.17(5)(d) of the Rule, the clearing agency is required to meet certain systems capacity, performance and disaster recovery standards for testing. These standards are consistent with prudent business practice. The activities and tests required in this paragraph are to be carried out at least once a year. In practice, continuing changes in technology, risk management requirements and competitive pressures will often result in these activities being carried out or tested more frequently.

As part of its activities and test, the clearing agency should carefully forecast demand and make appropriate plans to adapt to any plausible change in the volume of business or technical requirements. These plans should be based on a sound, comprehensive methodology so that the required service levels and performance can be achieved and maintained. Further, the clearing agency should determine a required level of redundant capacity, taking into account its level of importance and interconnectedness, so that if an operational outage occurs, the system is able to resume operations and process all remaining transactions before the end of the day.

Paragraph 3.17(5)(e) of the Rule requires the clearing agency to notify the Commission of any material system failure, malfunction or delay or other incident disruptive to the clearing agency's operations, or any breach of data security, integrity or confidentiality. A failure, malfunction or delay or other disruptive incident is considered to be "material" if the clearing agency would in the normal course of operations escalate the matter to or inform its senior management ultimately accountable for technology. It is also expected that, as part of this notification, the clearing agency will provide updates on the status of the failure and the resumption of service. Further, the clearing agency should have comprehensive and well-documented procedures in place to record, report, analyze, and resolve all operational incidents. In this regard, the clearing agency should undertake a "post-incident" review to identify the causes and any required improvement to the normal operations or business continuity arrangements, as further discussed within section 3.17. Such reviews should, where relevant, include the clearing agency's participants. The results of such internal reviews are required to be communicated to the Commission as soon as practicable.

(6) Subsection 3.17(6) of the Rule requires the clearing agency to engage a qualified party to conduct an annual independent assessment of its systems and related internal controls and information technology general controls and prepare a report in accordance with established audit standards. A qualified party is a person or company or a group of persons or companies with relevant experience in both information technology and in the evaluation of related internal systems or controls in a complex information technology environment. Qualified persons may include external auditors or third party information system consultants, as well as employees of the clearing agency, but may not be persons responsible for the development or operation of the systems or capabilities being tested.

(11) Subsection 3.17(11) of the Rule holds that if the clearing agency must make a change to its technology requirements regarding interfacing with or accessing the clearing agency to immediately address a failure, malfunction or material delay of its systems or equipment, it will immediately notify the Commission. We expect the amended technology requirements to be made publicly available as soon as practicable, either while the changes are being made or immediately after.

– ***Business continuity plan***

(12) Business continuity management is a key component of a clearing agency's operational risk-management framework. Under subsection 3.17(12), the clearing agency is required to have a business continuity plan, with clearly stated objectives. Paragraph 3.17(12)(a) of the Rule specifies that this plan must address events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. Both internal and external threats should be considered in the business continuity plan, and the impact of each threat should be identified and assessed. In addition to reactive measures, the clearing agency's business continuity plan may need to include measures that prevent disruptions of critical operations. All aspects of the business continuity plan should be clearly and fully documented. The clearing agency should explicitly assign responsibility for business continuity planning and devote adequate resources to this planning.

As part of its business continuity plan, under paragraph 3.17(12)(b), the clearing agency is required to set up a secondary site with sufficient resources, capabilities, and functionalities and appropriate staffing arrangements that would not be affected by a wide-scale disruption and would allow the secondary site to take over operations if needed. The secondary site should provide the level of critical services necessary to perform the functions consistent with the recovery time objective and should be located at a geographical distance from the primary site that is sufficient to have a distinct risk profile. A comparative risk analysis should be conducted on a selected secondary site. The need and possibility of a third site could be considered, in particular to provide sufficient confidence that the clearing agency's business continuity objectives will be met in all scenarios. The clearing agency should also consider alternative arrangements (for example, manual paper-based procedures) to allow for the processing of time-critical transactions in extreme circumstances.

The objectives of the business continuity plan should include a system's recovery time and recovery point. Under subparagraph 3.17(12)(c)(i), the clearing agency's business continuity plan, including its disaster recovery plan, must be designed to ensure that critical information technology systems can resume operations within two hours following disruptive events. Ideally, backup systems should commence processing immediately. Under subparagraph 3.17(12)(c)(ii), the plan must also be designed to enable the clearing agency to complete settlement by the end of the day even in case of extreme circumstances. Depending on their recovery-time objectives and designs, some clearing agencies may be able to resume operations with some data loss; however, contingency plans should ensure that the status of all transactions at the time of the disruption can be identified with certainty in a timely manner.

The clearing agency's business continuity plan should also include clearly defined procedures for crisis and event management. The plan, for example, should address the need for rapid deployment of a multi-skilled crisis and event-management team as well as procedures to consult and inform participants, interdependent clearing agencies, authorities, and others (such as service providers and, where relevant, the media) quickly. Communication with regulators, supervisors, and overseers is critical in case of a major disruption to the clearing agency's operations or a wider market distress that affects the clearing agency, particularly where relevant authorities might rely on data held by the clearing agency for crisis management. Depending on the nature of the problem, communication channels with local civil authorities (for physical attacks or natural disasters) or computer experts (for software malfunctions or cyber-attacks) may also need to be activated. If the clearing agency has global importance or critical linkages to one or more interdependent clearing agencies, it should set up, test, and review appropriate cross-system or cross-border crisis-management arrangements.

The clearing agency's business continuity plan and its associated arrangements should be subject to frequent review and testing. At a minimum, under paragraph 3.17(12)(d), such tests must be conducted annually. Tests should address various scenarios that simulate wide-scale disasters and inter-site switchovers. The clearing agency's employees should be thoroughly trained to execute the business continuity plan and participants, critical service providers, and linked clearing agencies should be regularly involved in the testing and be provided with a general summary of the testing results. The Commission expects that the clearing agency will also facilitate and participate in industry-wide testing of the business continuity plan. The clearing agency should make appropriate adjustments to its business continuity plan and associated arrangements based on the results of the testing exercises.

(13) A single point of failure is any point in a system, whether a service, activity, or process, that, if it fails to work correctly, leads to the failure of the entire system.

– ***Interdependencies, including outsourcing***

(14) As a clearing agency may be connected directly and indirectly to its participants, other clearing agencies, and service and utility providers, it is incumbent on the clearing agency to identify, monitor, and manage any risks that may be posed to its operations. Subsection 3.17(14) of the Rule sets out the requirements for identifying, monitoring and managing the risks of the interdependencies of any of the key services or systems of the clearing agency.

The clearing agency should identify both direct and indirect effects on its ability to process and settle transactions in the normal course of business and manage risks that stem from an external operational failure of connected entities. These effects include those transmitted through its participants, which may participate in multiple clearing agencies. In addition, the clearing agency should also identify, monitor, and manage the risks it faces from and poses to other clearing agencies (refer also to section 3.20). To the extent possible, interdependent clearing agencies should coordinate business continuity arrangements. The clearing agency also should consider the risks associated with its service and utility providers and the operational effect on the clearing agency if service or utility providers fail to perform as expected. The clearing agency should provide reliable service, not only for the benefit of its direct participants, but also for all entities that would be affected by its ability to process transactions.

To manage the operational risks associated with its participants, the clearing agency should consider establishing minimum operational requirements for its participants (see also section 3.18 on access, participation and process requirements). For example, the clearing agency may want to define operational and business continuity requirements for participants in accordance with the participant's role and importance to the system. In some cases, the clearing agency may want to identify critical participants based on the consideration of transaction volumes and values, services provided to the clearing agency and other interdependent systems, and, more generally, the potential impact on other participants and the system as a whole in the event of a significant operational problem. Critical participants may need to meet some of the same operational risk-management requirements as the clearing agency itself. The clearing agency should have clear and transparent criteria, methodologies, or standards for critical participants to ensure that their operational risks are managed appropriately.

(15) Where a clearing agency relies upon or outsources some of its operations to a service provider, it should generally ensure that those operations meet the same requirements they would need to meet if they were provided internally. Under subsection 3.17(15) of the Rule, the clearing agency must meet various requirements in respect of the outsourcing of critical services or systems to a service provider. The requirements under the subsection 3.17(15) apply regardless of whether the outsourcing arrangements are with third-party service providers, or with affiliates of the clearing agency.

Generally, the clearing agency is required to establish, implement, maintain and enforce policies and procedures to evaluate and approve outsourcing agreements to critical service providers. Such policies and procedures should include assessing the suitability of potential service providers and the ability of the clearing agency to continue to comply with Ontario securities law in the event of the service provider's bankruptcy, insolvency or termination of business. The clearing agency is also required to monitor and evaluate the on-going performance of the service provider to which they outsourced critical services, systems or facilities. Further, the clearing agency should have robust arrangements for the substitution of such providers, timely access to all necessary information, and the proper controls and monitoring tools.

Under subsection 3.17(15) of the Rule, a contractual relationship should be in place between the clearing agency and the critical service provider allowing it and relevant authorities to have full access to necessary information. The contract should ensure that the clearing agency's approval is mandatory before the critical service provider can itself outsource material elements of the service provided to the clearing agency, and that in the event of such an arrangement, full access to the necessary information is preserved. Clear lines of communication should be established between the outsourcing clearing agency and the critical service provider to facilitate the flow of functions and information between parties in both ordinary and exceptional circumstances.

Where the clearing agency outsources operations to critical service providers, it should disclose the nature and scope of this dependency to its participants. It should also identify the risks from its outsourcing and take appropriate actions to manage these dependencies through appropriate contractual and organisational arrangements. The clearing agency should inform the Commission about any such dependencies and the performance of these critical service providers. To that end, the clearing agency can contractually provide for direct contacts between the critical service provider and the Commission, contractually ensure that the Commission can obtain specific reports from the critical service provider, or the clearing agency may provide full information to the Commission.

Access, participation and due process requirements

– *General principle*

3.18 (1) Access refers to the ability to use a clearing agency's services and includes the direct use of the services by participants, including other market infrastructures and, where relevant, service providers. In some cases, access also includes indirect participation. Under subsection 3.18(1) of the Rule, a recognized clearing agency is required to allow for fair and open access to its services, while also having objective, risk-based and publicly disclosed criteria for participation. Fair and open access to the clearing agency's services encourages competition among market participants and promotes efficient and low-cost clearing and settlement.

– *Basic access standards*

(2) A clearing agency should always consider the risks that an actual or prospective participant may pose to itself and other participants. Accordingly, subsection 3.18(2) specifically requires the clearing agency to control the risks to which it is exposed by its participants by setting out risk-related requirements for participation in its services. The clearing agency should ensure that its participants and any linked clearing agency have the requisite operational capacity, financial resources, legal powers, and risk-management expertise to prevent unacceptable risk exposure for the clearing agency and other participants. Where participants act for other entities (indirect participants), it may be appropriate for the clearing agency to impose additional requirements to ensure that the direct participants have the capacity to do so. Operational requirements may include reasonable criteria relating to the participant's ability and readiness (for example, its IT capabilities) to use the clearing agency's services. Financial requirements may include reasonable risk-related capital requirements, contributions to prefunded default arrangements, and appropriate indicators of creditworthiness. Legal requirements may include appropriate licences and authorisations to conduct relevant activities as well as legal opinions or other arrangements that demonstrate that possible conflict of laws issues would not impede the ability of an applicant (for example, a foreign entity) to meet its obligations to the clearing agency. The clearing agency also may require participants to have appropriate risk-management expertise. If the clearing agency admits non-regulated entities, it should take into account any additional risks that may arise from their participation and design its participation requirements and risk-management controls accordingly.

The clearing agency's participation requirements must be clearly stated and publicly disclosed on its Website so as to eliminate ambiguity and promote transparency. In addition, the clearing agency's participation requirements should be justified in terms of its safety and efficiency as well as that of the markets it serves, be tailored to the clearing agency's specific risks, and be imposed in a manner commensurate with such risks.

Subject to maintaining acceptable risk control standards, the clearing agency should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit. While restrictions on access should generally be based on reasonable risk-related criteria, such restrictions may also be subject to the constraints of local laws and policies of the jurisdiction in which the clearing agency operates. Requirements should also reflect the risk profile of the activity; the clearing agency may have different categories of participation based on the type of activity. For example, a participant in the clearing services of a CCP may be subject to a different set of requirements than a participant in the auctioning process of the same CCP.

To help address the balance between open access and risk, the clearing agency should manage its participant-related risks through the use of risk-management controls, risk-sharing arrangements, and other operational arrangements that have the least-restrictive impact on access and competition that circumstances permit. For example, the clearing agency can use credit limits or collateral requirements to help it manage its credit exposure to a particular participant. The permitted level of participation may be different for participants maintaining different levels of capital. Where other factors are equal, participants holding greater levels of capital may be permitted less-restrictive risk limits or be able to participate in more functions within the clearing agency. The effectiveness of such risk-management controls may mitigate the need for the clearing agency to impose onerous participation requirements that limit access. The clearing agency could also differentiate its services to provide different levels of access at varying levels of cost and complexity. For example, the clearing agency may want to limit direct participation to certain types of entities and provide indirect access to others. Participation requirements (and other risk controls) can be tailored to each tier of participants based on the risks each tier poses to the clearing agency and its participants.

(3) Under subsection 3.18(3) of the Rule, the clearing agency is prohibited from unreasonably limiting access to its services, permitting unreasonable discrimination among its participants or the customers of its participants, or introducing competitive distortions. For example, requirements based solely on a participant's size are typically insufficiently related to risk and deserve careful scrutiny. In addition, the clearing agency is prohibited from unreasonably requiring the use or purchase of another service to utilize the clearing agency's functions, or impose unfair or inequitable fees or material costs. For instance, the clearing agency should not develop closed, proprietary interfaces that result in vendor lock-in or barriers to entry with respect to competing service providers. Also, the Commission is of the view that a requirement on participants of a CCP serving the derivatives markets to use an affiliated trade repository to report derivatives trades would be unreasonable.

– ***Participant monitoring***

(6) Under subsection 3.18(5), the clearing agency is required to monitor compliance with its participation requirements on an ongoing basis through the receipt of timely and accurate information. Participants should be obligated to report any developments that may affect their ability to comply with the clearing agency's participation requirements. The clearing agency should also have the authority to impose more-stringent restrictions or other risk controls on a participant in situations where it is determined that the participant poses heightened risk to the clearing agency. For example, if a participant's creditworthiness declines, the clearing agency may require the participant to provide additional collateral or reduce the participant's credit limit. Finally, the clearing agency should 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. The methodology of monitoring compliance and non-compliance should be fully documented.

Tiered participation arrangements

– ***General principle***

3.19 (1) (a) Section 19 of the Rule discusses a recognized clearing agency's requirements in respect of tiered participation arrangements. Tiered participation arrangements occur when firms (indirect participants) rely on the services provided by other firms (direct participants) to use a clearing agency's facilities. In such arrangements, tiered participants may not be bound by the rules of the clearing agency, even though its transactions are cleared or settled by or through the clearing agency. The dependencies and risk exposures (including credit, liquidity, and operational risks) inherent in these tiered arrangements can present risks to the clearing agency and its smooth functioning as well as to the participants themselves and the broader financial markets. Under paragraph 3.19(1)(a) of the Rule, the clearing agency must identify, monitor, and manage any material risks to the clearing agency arising from such tiered participation arrangements.

The nature of the risks posed by tiered participation arrangements is such that they are most likely to be material where there are indirect participants whose business through a clearing agency is a significant proportion of the clearing agency's overall business or is large relative to that of the direct participant through which they access the clearing agency's services. A clearing agency should therefore identify indirect participants responsible for a significant proportion of transactions processed by the clearing agency and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants, through which they access the clearing agency, in order to manage the risks arising from these transactions.

Normally, the identification, monitoring, and management of risks from tiered participation will be focused on financial institutions that are the immediate customers of direct participants and depend on the direct participant for access to a clearing agency's services. In exceptional cases, however, tiered participation arrangements may involve a complex series of financial intermediaries or agents, which may require the clearing agency to look beyond the direct participant and its immediate customer. The clearing agency should therefore identify all material dependencies between direct and indirect participants that might affect the clearing agency.

There are limits on the extent to which the clearing agency can, in practice, observe or influence direct participants' commercial relationships with their customers. However, a clearing agency will often have access to information on transactions undertaken on behalf of indirect participants and can set direct participation requirements that may include criteria relating to how direct participants manage relationships with their customers in-so-far as these criteria are relevant for the safe and efficient operation of the clearing agency. At a minimum, the clearing agency should identify the types of risk that could arise from tiered participation and should monitor concentrations of such risk. If the clearing agency or its smooth operation is exposed to material risk from tiered participation arrangements, it should seek to manage and limit such risk.

(b) The clearing agency should regularly review risks to which it may be exposed as a result of tiered participation arrangements. If material risks exist, the clearing agency should take mitigating action when appropriate. The results of the review process should be reported to the Board of Directors and updated periodically and after substantial amendments to the clearing agency's rules.

– ***Gathering and assessing information on risks arising from tiered participation arrangements***

(2) The clearing agency may be able to obtain information relating to tiered participation through its own systems or by collecting it from direct participants. Under subsection 3.19(2) of the Rule, the clearing agency must therefore ensure that its procedures, rules, and agreements with direct participants allow it the ability to gather basic information about indirect participants in order to identify, monitor, and manage any material risks to the clearing agency arising from such tiered participation arrangements. This information should, when collected, enable the clearing agency, at a minimum, to identify (i) the proportion of activity that direct participants conduct on behalf of indirect participants, (ii) direct participants that act on behalf of a material number of indirect participants, (iii) indirect participants with significant volumes or values of transactions in the system, and (iv) indirect participants whose transaction volumes or values are large relative to those of the direct participants through which they access the clearing agency.

– *Understanding material dependencies in tiered participation arrangements*

(3) Under subsection 3.19(3), the clearing agency is required to identify material dependencies between direct and indirect participants that may adversely affect the clearing agency, and in particular, have policies and procedures that enable it to identify certain indirect participants, as identified in paragraphs (a) and (b). Indirect participants will often have some degree of dependency on the direct participant through which they access the clearing agency. In the case of a clearing agency with few direct participants but many indirect participants, it is likely that a large proportion of the transactions processed by the clearing agency would depend on the operational performance of those few direct participants. Disruption to the services provided by the direct participants – whether for operational reasons or because of a participant's default – could therefore present a risk to the smooth functioning of the system as a whole. The clearing agency should identify and monitor material dependencies of indirect participants on direct participants so that the clearing agency has readily available information on which significant indirect participants may be affected by problems at a particular direct participant.

In some cases, issues at an indirect participant could also affect the clearing agency. This is most likely to occur where a large indirect participant accesses the clearing agency's facilities through a relatively small direct participant. Failure of this significant indirect participant to perform as expected, such as by failing to meet its payment obligations, or stress at the indirect participant, such as that which causes others to delay payments to the indirect participant, may affect the direct participant's ability to meet its obligations to the clearing agency. Clearing agencies should therefore identify and monitor the material dependencies of direct participants on indirect participants so that the clearing agency has readily available information on how it may be affected by problems at an indirect participant, including which direct participants may be affected.

Tiered participation arrangements typically create credit and liquidity exposures between direct and indirect participants. The management of these exposures is the responsibility of the participants and, where appropriate, subject to supervision by their regulators. The clearing agency is not expected to manage the credit and liquidity exposures between direct and indirect participants, although the clearing agency may have a role in applying credit or position limits in agreement with the direct participant. The clearing agency should, however, have access to information on concentrations of risk arising from tiered participation arrangements that may affect the clearing agency, allowing it to identify indirect participants responsible for a significant proportion of the clearing agency's transactions or whose transaction volumes or values are large relative to those of the direct participants through which they access the clearing agency. The clearing agency should identify and monitor such risk concentrations.

In a CCP, direct participants are responsible for the performance of their customers' financial obligations to the CCP. The CCP may, however, face an exposure to indirect participants (or arising from indirect participants' positions) if a direct participant defaults, at least until such time as the defaulting participant's customers' positions are ported to another participant or closed out. If a participant default would leave a clearing agency that acts as a CCP with a potential credit exposure related to an indirect participant's positions, it should ensure it understands and manages the exposure it would face. For example, it may set participation requirements that require the direct participant, on request, to demonstrate that it is adequately managing relationships with its customers to the extent that they may affect the CCP. The clearing agency should also consider establishing concentration limits on exposures to indirect participants, where appropriate.

Default scenarios can create uncertainty about whether indirect participants' transactions have been settled or will be settled and whether any settled transactions will be unwound. Default scenarios can also raise legal and operational risks for the clearing agency if there is uncertainty about whether the indirect or direct participant is liable for completing the transaction. The clearing agency should ensure that a default, whether by a direct participant or by an indirect participant, does not affect the finality of indirect participants' transactions that have been processed and settled by the clearing agency. The clearing agency should ensure that its rules and procedures are clear regarding the status of indirect participants' transactions at each point in the settlement process (including the point at which they become subject to the rules of the system and the point after which the rules of the system no longer apply) and whether such transactions would be settled in the event of an indirect or direct participant default. The clearing agency should also ensure that it adequately understands its direct participants' processes and procedures for managing an indirect participant's default. For example, the clearing agency should know whether the indirect participant's queued payments can be removed or future-dated transactions rescinded and whether such processes and procedures would expose the clearing agency to operational, reputational, or other risks.

Direct participation in a clearing agency usually provides a number of benefits, some of which may not be available to indirect participants, such as real-time gross settlement, exchange-of-value settlement, or settlement in central bank money. Moreover, indirect participants are vulnerable to the risk that their access to a clearing agency, their ability to make and receive payments and their ability to undertake and settle other transactions is lost if the direct participant on whom these indirect participants rely defaults or declines to continue their business relationship. If these indirect participants have large values or volumes of business through the clearing agency, this may affect its smooth functioning. For these reasons, where an indirect participant accounts for a large proportion of the transactions processed by the clearing agency, it may be appropriate to encourage direct participation. For example, the clearing agency may in some cases establish objective thresholds above which direct participation would normally be encouraged (provided that the firm satisfies the clearing agency's access criteria). Setting such thresholds and encouraging direct participation should be based on risk considerations rather than commercial advantage.

Links with other financial market infrastructures

– *General principle*

3.20 (1) For the purposes of the Rule and this CP, a link is to be understood as a set of contractual and operational arrangements between a recognized clearing agency and one or more other clearing agencies or trade repositories that connect these entities directly or through an intermediary. The clearing agency may establish a link for the primary purpose of expanding its services to additional financial instruments, markets, or institutions.

– *Identifying and managing link-related arrangements*

(2) Before entering into a link arrangement, and on an ongoing basis once the link is established, the clearing agency is required to identify and assess, and subsequently monitor and manage all potential sources of risk arising from the link, including legal, operational, credit, and liquidity risks.

The type and degree of risk varies according to the design and complexity of the entities and the nature of the relationship between them. In a simple case of a vertical link, for example, the clearing agency may provide basic services to another clearing agency, such as a CSD that provides securities transfer services to an SSS. Such links typically pose only operational and custody risks. Other links, such as an arrangement in which a CCP provides clearing services to another CCP, may be more complex and may pose additional risk, such as credit and liquidity risk. Cross-margining by two or more CCPs may also pose additional risk because the CCPs may rely on each other's risk-management systems to measure, monitor, and manage credit and liquidity risk. In addition, links between different types of clearing agencies may pose specific risks to one or all of the entities in the link arrangement. For example, a CCP may have a link with a CSD that performs the services of an SSS for the delivery of securities and settlement of margins. If the CCP poses risks to the CSD, the CSD should manage those risks.

In respect of managing legal risks, a link is required to have a well-founded legal basis, as further required by paragraph 3.20(3)(a) of the Rule.

In respect of managing operational risks, the clearing agency should ensure that linked entities provide an appropriate level of information about their operations to each other in order for each to perform effective periodic assessments of the operational risk associated with the link. In particular, the clearing agency should ensure that each entity's risk-management arrangements and processing capacity are sufficiently scalable and reliable to operate the link safely for both the current and projected peak volumes of activity processed over the link. Systems and communication arrangements between linked entities also should be reliable and secure so that the link does not pose significant operational risk. Any reliance by a linked entity on a critical service provider should be disclosed as appropriate to the other entities. In addition, a linked entity should be obligated to identify, monitor, and manage operational risks due to complexities or inefficiencies associated with differences in time zones, particularly as these affect staff availability. Governance arrangements and change-management processes should ensure that changes in one entity will not inhibit the smooth functioning of the link, related risk-management arrangements, or non-discriminatory access to the link.

In respect of managing financial risks, the clearing agency should ensure that each entity in a link is able to effectively measure, monitor, and manage their financial risk, including custody risk, arising from the link. Moreover, the entities and their participants should be obligated to ensure they have adequate protection of assets in the event of the insolvency of another linked entity or a participant default in a linked entity.

Specific guidance on mitigating and managing risks for CSD-CSD links and CCP-CCP links is provided in subsections 3.20(4) and (5).

(3) (a) As is required under paragraph 3.20(3)(a) of the Rule, a link should have a well-founded legal basis that supports its design and provides adequate protection to the entities involved in the link. Cross-border links may present legal risk arising from differences between the laws and contractual rules governing the linked entities and their participants, including those relating to rights and interests, collateral arrangements, settlement finality, and netting arrangements. For example, differences in law and rules governing settlement finality may lead to a scenario where a transfer is regarded as final in one entity, but not in the linked one(s). In some jurisdictions, differences in laws may create uncertainties regarding the enforceability of CCP obligations assumed by novation, open offer, or other similar legal device. Differences in insolvency laws may unintentionally give a participant in one CCP a claim on the assets or other resources of a linked CCP in the event of the first's default. To limit these uncertainties, the respective rights and obligations of the linked entities and, where necessary, their participants should be clearly defined in the link agreement. The terms of the link agreement should also set out, in cross-jurisdictional contexts, an unambiguous choice of law that will govern each aspect of the link.

(b) In all cases, links are required to be designed such that the clearing agency is able to properly observe the Rule. Further, the link should not hinder the ability of each of the other linked entities to observe Ontario securities law, including the Rule, as well as the ability of the their regulators to monitor compliance with Ontario securities law, where applicable.

– ***CSD-CSD links***

(4) Under subsection 3.20(4), if the clearing agency acts a CSD and is linked to another CSD(s), it is required to meet various standards, arising from various potential risks. Namely, as part of its activities, a CSD (the 'investor CSD), or a third party acting on behalf of the investor CSD, may choose to establish a link with another CSD (the 'issuer CSD', in which securities are issued or immobilized), for example by opening an account with the issuer CSD, so as to enable the cross-system settlement of securities transactions. If such a link is improperly designed, the settlement of transactions across the link could subject participants to new or increased risks. In addition to legal and operational risks, linked CSDs and their participants could also face credit and liquidity risks. For example, an operational failure or default in one CSD may cause settlement failures or defaults in a linked CSD and expose participants in the linked CSD, including participants that did not settle transactions across the link, to unexpected liquidity pressures or outright losses. A CSD's default procedures, for example, could affect a linked CSD through loss-sharing arrangements. Linked CSDs are therefore required under paragraph 3.20(4)(a) of the Rule to identify, monitor, and manage the credit and liquidity risks arising from the linked entity. In addition, under paragraph 3.20(4)(b) of the Rule, any credit extensions between CSDs must be covered fully by high-quality collateral and be subject to limits. Further, some practices deserve particularly rigorous attention and controls. In particular, under paragraph 3.20(4)(c) of the Rule, provisional transfers of securities between linked CSDs must be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final.

Under paragraph 3.20(4)(d) of the Rule, an investor CSD must only establish links with an issuer CSD if the link arrangement provides a high level of protection for the rights of the investor CSD's participants. In particular, the investor CSD should use issuer CSDs that provide adequate protection of assets in the event that the issuer CSD becomes insolvent. In some cases, securities held by an investor CSD can be subject to attachment by the creditors of the CSD or its participants and, as such, can also be subject to freezing or blocking instructions from local courts or other authorities. Further, if an investor CSD maintains securities in an omnibus account at an issuer CSD and a participant at the investor CSD defaults, the investor CSD should not use the securities belonging to other participants to settle subsequent local deliveries of the defaulting participant. The investor CSD should have adequate measures and procedures to avoid effects on the use of securities belonging to non-defaulting participants in a participant-default scenario.

Furthermore, linked CSDs should have robust reconciliation procedures to ensure that their respective records are accurate and current. Reconciliation is a procedure to verify that the records held by the linked CSDs match for transactions processed across the link. This process is particularly important when three or more CSDs are involved in settling transactions (that is, the securities are held in safekeeping by one CSD or custodian while the seller and the buyer participate in one or more of the linked CSDs).

Pursuant to paragraph 3.20(4)(e) of the Rule, if an investor CSD uses an intermediary to operate a link with an issuer CSD, the investor CSD must measure, monitor, and manage the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary. In an indirect CSD-CSD link, an investor CSD uses an intermediary (such as a custodian bank) to access the issuer CSD. In such cases, the investor CSD faces the risk that the custodian bank may become insolvent, act negligently, or commit fraud. Although an investor CSD may not face a loss on the value of the securities, the ability of the investor CSD to use its securities might temporarily be impaired. The investor CSD should measure, monitor, and manage on an ongoing basis its custody risk and provide evidence to the relevant authorities that adequate measures have been adopted to mitigate this custody risk. In addition, the investor CSD should ensure that it has adequate legal, contractual, and operational protections to ensure that its assets held in custody are segregated and transferable. Similarly, an investor CSD should ensure that its settlement banks or cash correspondents can perform as expected. In that context, the investor CSD should have adequate information on the business continuity plans of its intermediary and the issuer CSD to achieve a high degree of confidence that both entities will perform as expected during a disruptive event.

– ***CCP-CCP links***

(5) A clearing agency that acts as a CCP may establish links with one or more other CCPs. In this regard, if the clearing agency operating as a CCP is linked to another CCP, subsection 3.20(5) of the Rule requires it to meet various standards, arising from various potential risks.

Although the details of individual link arrangements among CCPs differ significantly because of the varied designs of CCPs and the markets they serve, there are currently two basic types of CCP links: peer-to-peer links and participant links. In a peer-to-peer link, a CCP maintains special arrangements with another CCP and is not subject to normal participant rules. Typically, however, the CCPs exchange margin and other financial resources on a reciprocal basis. The linked CCPs face current and potential future exposures to each other as a result of the process whereby they each net the trades cleared between their participants so as to create novated (net) positions between the CCPs. Risk management between the CCPs is based on a bilaterally approved framework, which is different from that applied to a normal participant.

In a participant link, one CCP (the participant CCP) is a participant in another CCP (the host CCP) and is subject to the host CCP's normal participant rules. In such cases, the host CCP maintains an account for the participant CCP and would typically require the participant CCP to provide margin, as would be the case for a participant that is not a CCP. A participant CCP should mitigate and manage its risk from the link separately from the risks in its core clearing and settlement activities. For example, if the host CCP defaults, the participant CCP may not have adequate protection because the participant CCP does not hold collateral from the host CCP to mitigate the counterparty risk posed to it by the host CCP. Risk protection in a participant link is one-way, unlike in a peer-to-peer link. The participant CCP that provides margin but does not collect margin from another linked CCP should therefore hold additional financial resources to protect itself against the default of the host CCP.

Both types of links – peer-to-peer and participant links – may present new or increased risks that should be measured, monitored, and managed by the CCPs involved in the link. The most challenging issue with respect to CCP links is the risk management of the financial exposures that potentially arise from the link arrangement. Under paragraphs 3.20(5)(a) and (b) of the Rule, before entering into a link with another CCP, the CCP must identify and assess the potential spill-over effects from the default of the linked CCP, as well as identify, assess and manage the potential spill-over effects on an ongoing basis thereafter. Under paragraph 3.20(5)(c) of the Rule, if a link has three or more CCPs, each CCP must identify and assess the risks of the collective link arrangement. A network of links between CCPs that does not properly acknowledge and address the inherent complexity of multi-CCP links could have significant implications for systemic risk.

Exposures faced by one CCP from a linked CCP should be identified, monitored, and managed with the same rigour as exposures from a CCP's participants to prevent a default at one CCP from triggering a default at a linked CCP. Such exposures should be covered fully, primarily through the use of margin or other equivalent financial resources. In particular, under paragraph 3.20(5)(d) of the Rule, each CCP in a CCP link arrangement must 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. Financial resources used to cover inter-CCP current exposures should be prefunded with highly liquid assets that exhibit low credit risk. Best practice is for CCPs to have near real time inter-CCP risk management. However, at a minimum, financial exposures among linked CCPs should be marked to market and covered on a daily basis. CCPs also need to consider and address the risks arising from links in designing their stress tests and calibrating their prefunded default arrangements. Linked CCPs should also take into account the effects that possible contributions to each other's prefunded default arrangements, exchange of margin, common participants, major differences in their risk-management tools, and other relevant features may have on their risk-management frameworks, especially in relation to the legal, credit, liquidity, and operational risks they face.

Because of the different possible types of links, different types of CCPs, and differences in the legal and regulatory frameworks in which CCPs may operate, different combinations of risk-management tools may be used by the CCP. When linked CCPs have materially different risk-management frameworks, the risks stemming from the link are more complex. In this case, the linked CCPs should carefully assess the effectiveness of their risk-management models and methodologies, including their default procedures, in order to determine whether and to what extent their inter-CCP risk-management frameworks should be harmonised or whether additional risk-mitigation measures would be sufficient to mitigate risks arising from the link.

A CCP (the first CCP) will usually have to provide margin to a linked CCP for open positions. In some cases, the first CCP may not be able to provide margin that it has collected from its participants to the linked CCP because the first CCP's rules may prohibit the use of its participants' margin for any purpose other than to cover losses from a default of a participant in the first CCP, or the first CCP's legal or regulatory requirements may not permit such reuse of its participants' collateral. As such, the CCP would need to use alternative financial resources to cover its counterparty risk to the linked CCP, which is normally covered by margin. If a CCP is allowed to reuse its participants' collateral to meet an inter-CCP margin requirement, such collateral provided by the first CCP must be unencumbered and its use by the linked CCP in the event of the default of the first CCP must not be constrainable by actions taken by the participants of the first CCP. The credit and liquidity risk arising from the reuse of margin should be adequately mitigated by the CCPs. This can be achieved through segregation, protection, and custody of margin exchanged between CCPs in a manner that allows for its swift and timely return to the CCP in case of a decrease in the exposures and that allows for supplemental margin (and, if necessary, supplemental default fund contributions) needed to cover the counterparty risk between the linked CCPs to be charged directly to the participants who use the link service, if applicable.

Linked CCPs should maintain arrangements that are effective in managing the risks arising from the link; such arrangements often involve a separate default fund to cover that risk. In principle, the risk-management measures related to the link should not reduce the resources that a CCP holds to address other risks. The most direct way to achieve this outcome is for CCPs not to participate in each other's default funds, which may in turn mean that the CCP will need to provide additional margin. However, in arrangements in which CCPs have agreed, consistent with their regulatory framework, to contribute to each other's default funds, the linked CCPs should assess and mitigate the risks of making such contributions via specific conditions. In particular, funds used by a CCP to contribute to another CCP's default fund must represent prefunded additional financial resources and must not include resources used by the CCP to satisfy its regulatory requirements to hold sufficient capital or participant margin funds (or any other funds, including independent default fund resources) held by the CCP to mitigate the counterparty risk presented by its participants. The contributing CCP should further ensure that any consequent exposure of its own participants to the risk of a participant default in the linked CCP is fully transparent to and understood by its participants. The contributing CCPs may, for example, consider it appropriate to ensure the default fund contribution is made only by those of its participants that use the link, if applicable. Moreover, the resources provided by one CCP to another should be held in such a way that they are ring fenced from other resources provided to that CCP. For example, securities could be held in a separate account at a custodian. Cash would need to be held in segregated accounts to be considered as acceptable collateral in this case. Finally, in case of a participant default in the first CCP, the use of the linked CCP's contribution to the default fund of the first CCP could be restricted or limited. For example, the linked CCP's contribution to the default fund could be put at the bottom of the first CCP's default waterfall.

Link arrangements between CCPs will expose each CCP to sharing in potentially uncovered credit losses if the linked CCP's default waterfall has been exhausted. For example, a CCP may be exposed to loss mutualisation from defaults of a linked CCP's participants. This risk will be greater to the extent that the first CCP is unable directly to monitor or control the other CCP's participants. Such contagion risks can be even more serious in cases where more than two CCPs are linked, directly or indirectly, and a CCP considering such a link should satisfy itself that it can manage such risks adequately. Each CCP should ensure that the consequent exposure of its own participants to a share in these uncovered losses is fully understood and disclosed to its participants. CCPs may consider it appropriate to devise arrangements to avoid sharing in losses that occur in products other than those cleared through the link and to confine any loss sharing to only participants that clear products through the link. Depending on how losses would be shared, CCPs may need to increase financial resources to address this risk.

Any default fund contributions or allocation of uncovered losses should be structured to ensure that (i) no linked CCP is treated less favourably than the participants of the other CCP and (ii) each CCP's contribution to the loss sharing arrangements of the other is no more than proportionate to the risk the first CCP poses to the linked CCP.

Efficiency and effectiveness

– ***General principle***

3.21 (1) Under subsection 3.21(1) of the Rule, a recognized clearing agency is required to efficiently and effectively meet the needs of its participants and the markets it serves. In particular, the clearing agency should have regard for choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures. In the context of this section, and as further operationalized in subsection 3.21(2) of the Rule, "efficiency" refers generally to the resources required by the clearing agency to perform its functions, while "effectiveness" refers to whether the clearing agency is meeting its intended goals and objectives.

Efficiency is a broad concept that encompasses what the clearing agency chooses to do, how it does it, and the resources required. Fundamentally, the clearing agency should be designed and operated to meet the needs of its participants and the markets it serves. The clearing agency's efficiency will ultimately affect its use by its participants and their customers as well as these entities' ability to conduct robust risk management, which may affect the broader efficiency of financial markets.

The clearing agency is effective when it reliably meets its obligations in a timely manner and achieves the public policy goals of safety and efficiency for participants and the markets it serves. In the context of oversight and auditing, the clearing agency's effectiveness may also involve meeting service and security requirements.

A clearing agency that operates inefficiently or functions ineffectively may distort financial activity and the market structure, increasing not only the financial and other risks of a clearing agency's participants, but also the risks of their customers and end users. If the clearing agency is inefficient, a participant may choose to use an alternate arrangement that poses increased risks to the financial system and the broader economy. The primary responsibility for promoting the efficiency and effectiveness of the clearing agency belongs to its owners and operators.

– ***Presumption***

(2) (a) The clearing agency's efficiency and effectiveness depends partly on its choice of, and its reliability in meeting its intended goals and objectives related to a clearing and settlement arrangement (for example, gross, net, or hybrid settlement; real time or batch processing; and novation or guarantee scheme); operating structure (for example, links with multiple trading venues or service providers); scope of products cleared, settled, or recorded; and use of technology and procedures (for example, communication procedures and standards). Under paragraph 3.21(2)(a) to (c) of the Rule, it will be presumed that the clearing agency is operating efficiently and effectively if it can demonstrate all the items listed in the paragraphs. Under paragraph 3.21(2)(a) of the Rule, the clearing agency must demonstrate that it meets the needs of its participants and the markets it serves, with particular regard to items (i) to (iv) listed in the Rule.

In designing an efficient system, the clearing agency should also consider the practicality and costs for participants, their customers, and other relevant parties (including other clearing agencies and service providers). Furthermore, the clearing agency's technical arrangements should be sufficiently flexible to respond to changing demand and new technologies.

(b) To further demonstrate its efficient and effective operation, the clearing agency should have clearly defined goals and objectives that are measureable and achievable. Under paragraph 3.21(2)(b), the clearing agency is required to set minimum service-level targets (such as the time it takes to process a transaction and the availability of its IT system), risk-management expectations (such as the level of financial resources it should hold), and business priorities (such as the development of new services), in order to establish that it is operating efficiently and effectively.

(c) Finally, in establishing that the clearing agency is operating efficiently and effectively, paragraph 3.21(2)(c) of the Rule requires that the clearing agency demonstrate that it has mechanisms for the regular review of its efficiency and effectiveness. Such reviews should include periodic measurement of progress against the clearing agency's goals and objectives. As well, since efficiency can involve cost control, the clearing agency's reviews should include regular review of its costs and pricing structure.

Communication procedures and standards

– ***General principle***

3.22 (1) The ability of participants to communicate with a clearing agency in a timely, reliable, and accurate manner is key to achieving efficient clearing, settlement, depository, recording and payment processes. A clearing agency's adoption of internationally accepted communication procedures and standards for its core functions – i.e. standardized communication procedures (or protocols) which provide a common set of rules across systems for exchanging messages – can facilitate the elimination of manual intervention in clearing and settlement processing, reduce risks and transaction costs, improve efficiency, and reduce barriers to entry into a market. Reducing the need for intervention and technical complexity when processing transactions can also help to reduce the number of errors, avoid information losses, and ultimately reduce the resources needed for data processing by a clearing agency, its participants, and markets generally. In this regard, subsection 3.22(1) of the Rule requires a recognized clearing agency to use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards to ensure effective communication between the clearing agency and its participants, their customers, and others that connect to the clearing agency (such as third-party service providers and other clearing agencies). The clearing agency is encouraged but not required to use or accommodate internationally accepted communication procedures and standards for purely domestic transactions.

If the clearing agency conducts activities across borders, it should also use internationally accepted communication procedures and standards or, at a minimum, accommodate them. A clearing agency that, for example, settles a chain of transactions processed through multiple clearing agencies or provides services to users in multiple jurisdictions should strongly consider using internationally accepted communication procedures and standards to achieve efficient and effective cross-border financial communication. Furthermore, adopting these communication procedures can facilitate interoperability between the information systems or operating platforms of clearing agencies in different jurisdictions, which allows market participants to obtain access to multiple clearing agencies without facing technical hurdles (such as having to implement or support multiple local networks with different characteristics). A clearing agency that operates across borders also should be able to support and use well-established communication procedures, messaging standards, and reference data standards relating to counterparty identification and securities numbering processes. For example, relevant standards promulgated by the International Organization for Standardization should be carefully considered and adopted by the clearing agency.

– ***Systems that translate or convert data***

(2) While the use of internationally accepted standards for message formats and data representation (whether used domestically or across borders) will generally improve the quality and efficiency of the clearing and settlement of financial transactions, where the clearing agency does not itself fully adopt internationally accepted communication standards, it can still potentially interoperate with the information systems or operating platforms of other clearing agencies by developing systems to translate or convert international procedures and standards into the domestic equivalent, and vice versa.

Transparency

– ***General principle***

3.23 (1) Under subsection 3.23(1) of the Rule, a recognized clearing agency is required to provide sufficient information to its participants and prospective participants to enable them to identify clearly and understand fully the risks and responsibilities of participating in the system. To achieve this objective, and as part of the requirements under subsection 3.1(2) of the Rule, the clearing agency should adopt and disclose written rules and procedures that are clear and comprehensive and that include explanatory material written in plain language so that participants can fully understand the system's design and operations, their rights and obligations, and the risks of participating in the system. The clearing agency's rules, procedures, and explanatory material need to be accurate, up-to-date, and readily available to all current and prospective participants. Under subsections 3.23(1) and (2) of the Rule, the relevant rules and procedures of the clearing agency must be fully disclosed to participants and the public on its Website.

– *Understanding risks*

(3) The clearing agency's rules and procedures are typically the foundation of the clearing agency and provide the basis for participants' understanding of the risks they incur by participating in the clearing agency. In this regard, and further to subsections 3.23(1) and (2) of the Rule, which requires the clearing agency to adopt clear and comprehensive rules and procedures that are fully disclosed to participants and to the public, subsection 3.23(3) of the Rule requires the clearing agency's relevant rules and procedures to include clear descriptions of the system's design and operations, as well as the clearing agency and its participants' rights and obligations, so that participants can assess the risk they would incur by participating in the clearing agency. They should clearly outline the respective roles of participants and the clearing agency as well as the rules and procedures that will be followed in routine operations and non-routine, though foreseeable, events, such as a participant default. In particular, the clearing agency should have clear and comprehensive rules and procedures for addressing financial and operational problems within the system.

(4) Participants bear primary responsibility for understanding the rules, procedures, and risks of participating in a clearing agency as well as the risks they may incur when the clearing agency has links with other clearing agencies. However, subsection 3.23(4) of the Rule requires the clearing agency to provide all documentation, training, and information necessary to facilitate participants' understanding of the clearing agency's rules and procedures and the risks they face from participating in the clearing agency. New participants should receive training before using the system, and existing participants should receive, as needed, additional periodic training. The clearing agency should disclose to each individual participant stress test scenarios used, individual results of stress tests, and other data to help each participant understand and manage the potential financial risks stemming from participation in the clearing agency. Other relevant information that should be disclosed to participants, but typically not to the public, includes key highlights of the clearing agency's business continuity arrangements.

As the clearing agency is well placed to observe the performance of its participants, it should promptly identify those participants whose behaviour demonstrates a lack of understanding of, or compliance with, applicable rules, procedures, and risks of participation. In such cases, the clearing agency should take steps to rectify any perceived lack of understanding by the participant and take other remedial action necessary to protect the clearing agency and its participants. This may include notifying senior management within the participant institution. In cases in which the participant's actions present significant risk or present cause for the participant's suspension, the clearing agency should notify the appropriate regulatory, supervisory, and oversight authorities.

– *Changes to rules and procedures*

(5) Further to subsections 3.23(1) and (2) of the Rule which require the disclosure of all relevant rules and key procedures, subsection 3.23(5) requires that the clearing agency have a clear and fully disclosed process for proposing and implementing changes to its rules and procedures. The clearing agency is also required to have rules and procedures for informing participants and the Commission of such changes. Similarly, the rules and procedures should clearly disclose the degree of discretion that the clearing agency can exercise over key decisions that directly affect the operation of the system, including in crises and emergencies. For example, the clearing agency's procedures may provide for discretion regarding the extension of operating hours to accommodate unforeseen market or operational problems. The clearing agency also should have appropriate procedures to minimize any conflict-of-interest issues that may arise when authorized to exercise its discretion.

– *Disclosure of fees*

(6) Subsections 3.23 (6) and (7) of the Rule require the public disclosure of fees for individual services and policies on discounts, as well as clear descriptions of priced services for comparability purposes on its Website. In addition, the clearing agency should disclose information on the system design, as well as technology and communication procedures, that affect the costs of operating the clearing agency. These disclosures collectively help participants evaluate the total cost of using a particular service, compare these costs to those of alternative arrangements, and select only the services that they wish to use. The clearing agency's design will influence not only how much liquidity participants need to hold in order to process payments but also opportunity costs of holding such liquidity. The clearing agency should provide timely notice to participants and the public of any changes to services and fees.

– *Disclosure framework and basic data*

(8) Under subsection 3.23(8), the clearing agency should provide to the public comprehensive and appropriately detailed responses to the CPSS-IOSCO FMI Disclosure Framework Document to improve the overall transparency of the clearing agency, its governance, operations, and risk-management framework. In order for the disclosures to reflect correctly the clearing agency's current rules, procedures, and operations, the clearing agency should update its responses following material changes to the system or its environment. At a minimum, the clearing agency should review its responses to the CPSS-IOSCO FMI Disclosure Framework Document every two years to ensure continued accuracy and usefulness.

Other relevant information for participants and, more generally, the public could include general information on the clearing agency's full range of activities and operations, such as the names of direct participants in the clearing agency, key times and dates in clearing agency operations, and its overall risk-management framework (including its margin methodology and assumptions). The clearing agency also should disclose its financial condition, financial resources to withstand potential losses, timeliness of settlements, and other performance statistics. The clearing agency is required to disclose, at a minimum, basic data on transaction volumes and values under subsection 3.23(9) of the Rule. The Commission is of the view that such minimum basic data on transaction volumes and values are those that are set forth in the CPSS-IOSCO report *Public quantitative disclosure standards for central counterparties* for a clearing agency that acts as a CCP.[14]

The clearing agency should make the relevant information and data it discloses available to the public through generally accessible media, including its Website. The data should be accompanied by robust explanatory documentation that enables users to understand and interpret the data correctly.

[14] See the consultative CPSS-IOSCO report *Public quantitative disclosure standards for central counterparties*, published in October 2013, available at the Bank for International Settlements' website (www.bis.org) and IOSCO website (www.iosco.org).