#### Chapter 13

### SROs, Marketplaces and Clearing Agencies

#### 13.1 SROs

#### 13.1.1 Notice of Commission Approval – IIROC Rules Notice – UMIR – Provisions Respecting Electronic Trading

#### IIROC RULES NOTICE PROVISIONS RESPECTING ELECTRONIC TRADING

12-0200 June 28, 2012

#### **Executive Summary**

On June 27, 2012, the Board of Directors ("Board") of IIROC approved the publication for comment of proposed amendments to UMIR respecting certain requirements for electronic trading on Canadian marketplaces ("Proposed Amendments"). Concurrent with this notice, the Canadian Securities Administrators ("CSA") are publishing National Instrument 23-103 *Electronic Trading* and its Companion Policy ("ETR").

The Proposed Amendments would:

- align the requirements of UMIR to the ETR;
- expand the existing supervisory requirements for trading to specifically include the establishment and maintenance of risk management and supervisory controls, policies and procedures related to access to one or more marketplaces and/or the use of an automated order system;
- permit, in certain circumstances, a Participant to authorize an investment dealer to perform on its behalf the setting or adjustment of a risk management or supervisory control, policy or procedure to an investment dealer by a written agreement;
- impose specific gatekeeper obligations on a Participant who has authorized an investment dealer to perform on its behalf the setting or adjustment of a risk management or supervisory control, policy or procedure to an investment dealer;
- clarify the circumstances under which a trade may be cancelled, varied or corrected with notice to, or the consent of, a Market Regulator; and
- make several editorial changes or consequential amendments to certain provisions including the incorporation into UMIR of defined terms used in the ETR.

The most significant impacts of the Proposed Amendments would be to:

- ensure that Participants and Access Persons adopt, document and maintain a system of risk management and supervisory controls, policies and procedures reasonably designed to manage the risks associated with electronic trading and access to marketplaces;
- ensure that Participants and Access Persons are effectively supervising trading activity and are accounting for the risks associated with electronic access to marketplaces in their supervisory and compliance monitoring procedures; and
- require an appropriate level of understanding, ongoing testing and appropriate monitoring of any automated order systems in use by a Participant, Access Person, or any client of the Participant.

IIROC would expect that, if the Proposed Amendments are approved by the Recognizing Regulators, the amendments would be implemented on the later of:

• March 1, 2013, the date the ETR becomes effective; and

#### • 120 days following the publication of notice of approval of the amendments.

The CSA expects to issue in September of 2012 a proposal for a National Instrument which will cover aspects of the provision of third-party access to marketplaces, including direct electronic access. Concurrent with this CSA initiative, IIROC would expect to issue additional proposed amendments to UMIR to ensure alignment with the proposed National Instrument.

#### 1. Policy Development Process

IIROC has been recognized as a self-regulatory organization by each of the Canadian provincial securities regulatory authorities (the "Recognized Regulators") and, as such, is authorized to be a regulation services provider for the purposes of National Instrument 21-101 ("Marketplace Operation Instrument") and National instrument 23-101 ("CSA Trading Rules").

As a regulation services provider, IIROC administers and enforces trading rules for the marketplaces that retain the services of IIROC.<sup>1</sup> IIROC has adopted, and the Recognizing Regulators have approved, UMIR as the market integrity trading rules that will apply in any marketplace that retains IIROC as its regulation services provider.

The Market Rules Advisory Committee ("MRAC") of IIROC has reviewed the Proposed Amendments. MRAC is an advisory committee comprised of representatives of each of: the marketplaces for which IIROC acts as a regulation services provider; Participants; institutional investors and subscribers; and the legal and compliance community.<sup>2</sup>

The text of the Proposed Amendments is set out in Appendix "A". The Proposed Amendments are designed to align UMIR with the requirements of the ETR, and as such, the Board has determined the Proposed Amendments to be in the public interest. Comments are requested on all aspects of the Proposed Amendments. Comments should be in writing and delivered by **September 26, 2012** to:

James E. Twiss, Vice-President, Market Regulation Policy, Investment Industry Regulatory Organization of Canada, Suite 2000 121 King Street West, Toronto, Ontario. M5H 3T9 Fax : 416.646.7265 e-mail : jtwiss@iiroc.ca

# Commentators should be aware that a copy of their comment letter will be made publicly available on the IIROC website (<u>www.iiroc.ca</u> under the heading "Policy" and sub-heading "Market Proposals/Comments") upon receipt. A summary of the comments contained in each submission will also be included in a future IIROC Notice.

After considering the comments on the Proposed Amendments received in response to this Request for Comments together with any comments of the Recognizing Regulators, IIROC may recommend that revisions be made to the Proposed Amendments. If the revisions are not of a material nature, the Board has authorized the President to approve the revisions on behalf of IIROC and the Proposed Amendments as revised will be subject to approval by the Recognizing Regulators. If the revisions are material, the Proposed Amendments as revised will be submitted to the Board for ratification and, if ratified, will be republished for further public comment.

Presently, IIROC has been retained to be the regulation services provider for: Alpha Exchange Inc. ("Alpha"), Canadian National Stock Exchange ("CNSX"), Toronto Stock Exchange ("TSX") and TSX Venture Exchange ("TSXV"), each as an "exchange" for the purposes of the Marketplace Operation Instrument ("Exchange"); and for Bloomberg Tradebook Canada Company ("Bloomberg"), Chi-X Canada ATS Limited ("Chi-X"), Instinet Canada Cross Ltd. ("Instinet"), Liquidnet Canada Inc. ("Liquidnet"), Omega ATS Limited ("Omega"), TMX Select ("TMX Select") and TriAct Canada Marketplace LP (the operator of "MATCH Now"), each as an alternative trading system ("ATS"). CNSX presently operates an "alternative market" known as "Pure Trading" that is entitled to trade securities that are listed on Exchanges and that presently trades securities listed on the TSX and TSXV.

<sup>&</sup>lt;sup>2</sup> The review by MRAC of the Proposed Amendments should not be construed as approval or endorsement of the Proposed Amendments. Members of MRAC may express their personal views on topics and that advice may not represent the views of their respective organizations as expressed during the public comment process.

#### 2. Background to the Proposed Amendments

#### 2.1 Electronic Trading Rule

#### 2.1.1 Framework for Regulation of Electronic Trading

On April 8, 2011, the CSA published proposed National Instrument 23-103 and Companion Policy ("2011 Proposal") for comment.<sup>3</sup> The 2011 Proposal was designed to address areas of concern and risks brought about by electronic trading. Given the increased use of technology driving all aspects of trading and access to marketplaces, as well as the increasing speed at which trading occurs, Canadian regulators as well as regulators in other jurisdictions are introducing frameworks to manage the risks. Such risks include those relating to liability, credit, market integrity, sub-delegation, technology or systems and regulatory arbitrage.

A number of international initiatives were reviewed and considered in the development of the ETR, including the Securities and Exchange Commission Rule 15c3-5 *Risk Management Controls for Brokers or Dealers with Market Access*<sup>4</sup> as well as the International Organization of Securities Commissions (IOSCO) Report *Principles for Direct Electronic Access to Marketplaces.*<sup>5</sup> The IOSCO report makes recommendations such as minimum financial standards for clients with direct electronic access, and establishing controls to manage the risks associated with electronic trading. The requirements of the ETR are consistent with those recommendations related to governing electronic trading.

Concurrent with this notice, the CSA is publishing the final ETR which will become effective on March 1, 2013. For further information relating to the ETR, please refer to <u>www.osc.gov.on.ca</u>.

The ETR introduces a comprehensive framework designed to address areas of concern and risks brought about by electronic trading. Generally, the ETR places responsibility for managing risks and maintaining supervisory controls, policies and procedures related to electronic trading on:

- a "marketplace participant" (defined as: a member of an exchange; user of a Quotation and Trade Reporting System; or subscriber of an ATS) whether trading is of a proprietary nature or on behalf of clients; and
- a marketplace.

#### 2.1.2 Requirements Applicable to Marketplace Participants

The ETR builds on the obligations outlined in Section 11.1 of National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*<sup>6</sup> ("NI 31-103") under which a registered firm must establish, maintain and apply policies and procedures that establish a system of controls and supervision sufficient to provide reasonable assurance that the firm and each individual acting on its behalf complies with securities legislation and manage the risks associated with its business in accordance with prudent business practices.

The ETR requires that these risk management and supervisory controls, policies and procedures must be reasonably designed to:

- ensure that all orders are monitored pre- and post-trade;
- systematically limit the financial exposure of the marketplace participant;
- ensure compliance with all marketplace and regulatory requirements;
- ensure the marketplace participant can stop or cancel the entry of orders to a marketplace;
- ensure the marketplace participant can suspend or terminate any marketplace access granted to a client; and
- ensure the entry of orders does not interfere with fair and orderly markets.

A participant dealer<sup>7</sup> may on a reasonable basis, authorize an investment dealer to perform on its behalf the setting or adjustment of a specific risk management or supervisory control, policy or procedure to an investment dealer under certain

<sup>&</sup>lt;sup>3</sup> Published at (2011) 34 OSCB beginning at page 4133.

<sup>&</sup>lt;sup>4</sup> Published at: <u>http://www.sec.gov/rules/final/2010/34-63241.pdf</u>.

<sup>&</sup>lt;sup>5</sup> Published at: <u>http://www.iosco.org/library/pubdocs/pdf/IOSCOPD332.pdf</u>.

<sup>&</sup>lt;sup>6</sup> Published at: <u>http://www.osc.gov.on.ca/documents/en/Securities-Category3/ni 20120228 31-103 unofficial-consolidated.pdf</u>.

<sup>&</sup>lt;sup>7</sup> The term "participant dealer" is defined in ETR as "a marketplace participant that is an investment dealer".

circumstances where the investment dealer's relationship with an ultimate client would provide them with better access to information, and would thus provide for a more effective setting or adjusting of the control, policy or procedure. Granting such an authorization would require a written agreement between the participant dealer and the investment dealer, and a regular and ongoing assessment of the adequacy and effectiveness of such an agreement.

#### 2.1.3 Requirements Applicable to Use of Automated Order Systems

The ETR establishes requirements surrounding the use of automated order systems.<sup>8</sup> A marketplace participant is required to take all reasonable steps to ensure that any use of an automated order system either by itself or by any client does not interfere with fair and orderly markets. Similarly, any client of a marketplace participant is itself obligated to take reasonable steps to ensure the same.

A marketplace participant must also have a level of knowledge and understanding of any automated order system used by itself or a client that is sufficient to identify and manage any risks associated with its use. A marketplace participant must also ensure that each automated order system is tested prior to use, and at least annually thereafter, and have controls in place to immediately disable and prevent orders generated by an automated order system from reaching a marketplace.

#### 2.1.4 Requirements Applicable to Marketplaces

In addition to marketplace participants, the ETR also recognizes the role of the marketplace in managing the risks associated with electronic trading. The ETR places a requirement on a marketplace to prevent the execution of orders from exceeding price and/or volume thresholds set by the regulation services provider or by a marketplace if it is a recognized exchange or quotation and trade reporting system that directly monitors the conduct of its members or users and enforces certain requirements set pursuant to the CSA Trading Rules.<sup>9</sup>

The ETR also sets outs specific conditions under which a marketplace may cancel, vary or correct a trade executed on that marketplace. The marketplace must establish, maintain and ensure compliance with reasonable policies and procedures that clearly outline how a variation, cancellation or correction can occur, and must make these policies and procedures publicly available.

Additionally, the ETR requires a marketplace to provide a marketplace participant with access to its order and trade information on an immediate basis and on reasonable terms, to ensure that marketplace participants can effectively implement the risk management and supervisory controls policies and procedures required by the rule.

#### 2.1.5 Future Initiatives

Part 3 of the 2011 Proposal outlined requirements which were applicable to Participants providing electronic access to marketplaces to clients (including to other Participants in the capacity as jitney). It set out specific requirements regarding:

- the provision of such access;
- standards to be applied before granting access;
- specific elements to be included in a written agreement;
- training of clients;
- client identifiers for regulatory purposes; and
- clients trading on behalf of their own clients.

In the coming months, the CSA expects to issue a proposal for a National Instrument which will republish and expand on these elements of the 2011 Proposal. Concurrent with this CSA initiative, IIROC would expect to issue additional proposed amendments to UMIR to ensure alignment with the proposed National Instrument.

<sup>&</sup>lt;sup>8</sup> The term "automated order system" is defined in ETR as "a system used to automatically generate or electronically transmit orders that are made on a pre-determined basis". As set out in section 1.2(1) of National Instrument 23-103 CP, an automated order system would encompass "both hardware and software used to generate or electronically transmit orders on a pre-determined basis and would include smart order routers and trading algorithms that are used by marketplace participants, offered by marketplace participants to clients or developed or used by clients."

<sup>&</sup>lt;sup>9</sup> See section 8 of ETR. IIROC has sought public comment on the approach which should be adopted to the establishment of acceptable marketplace thresholds. See IIROC Notice 12-0162 – Rules Notice – Request for Comment – UMIR – Request for Comments on Marketplace Thresholds (May 10, 2012).

#### 2.2 Supervision Obligations for Electronic Trading under UMIR

Currently, Rule 7.1 of UMIR establishes trading supervision obligations which Participants must follow, including:

- adopting written policies and procedures to be followed by directors, officers, partners and employees of the Participant that are adequate, taking into account the business and affairs of the Participant, to ensure compliance with UMIR and each Policy; and
- complying, prior to the entry of an order on a marketplace, with:
  - o applicable regulatory standards with respect to the review, acceptance and approval of orders,
  - o the policies and procedures adopted, and
  - o all requirements of UMIR and each Policy.

Policy 7.1 of UMIR elaborates further on the responsibility of Participants for trading supervision and compliance, and certain elements of Policy 7.1 relate more particularly to electronic trading. Specifically, the obligation to supervise applies whether the order is entered on a marketplace:

- by a trader employed by the Participant;
- by an employee of the Participant through an order routing system;
- directly by a client and routed to a marketplace through the trading system of the Participant; or
- by any other means.

The Participant maintains responsibility for any order which is entered on a marketplace without the involvement of a trader employed by the Participant, as an example when the client maintains a "systems interconnect arrangement" in accordance with marketplace requirements. In such circumstances adequate supervision policies and procedures are required to address the potential additional risk exposure with orders not directly handled by the Participant but that remain the Participant's responsibility.

#### 3. Discussion of the Proposed Amendments

The following is a summary of the principal components of the Proposed Amendments:

#### 3.1 Trading Supervision Obligations

#### 3.1.1 Risk Management and Supervisory Controls, Policies and Procedures

Rule 7.1 currently establishes trading supervision obligations which Participants must follow, including the establishment of written policies and procedures to ensure compliance with UMIR. With the ETR providing a new framework designed to mitigate the risks of electronic trading, the Proposed Amendments add several new subsections to align the supervisory requirements of Rule 7.1 with the requirements of the ETR.

The Proposed Amendments would require that a Participant or Access Person adopt a system of risk management controls designed to ensure the management of risks specifically associated with electronic trading. Particularly, they should be designed to manage the risks associated with access to one or more marketplaces, and if applicable, the use of any automated order system, by a Participant, a client of the Participant or an Access Person.

Proposed Part 7 of Policy 7.1 provides further information regarding the requirements set out in Rule 7.1, and details the expectations in regard to the elements of the risk management and supervisory controls, policies and procedures which must be employed by Participants and Access Persons. These must include:

- automated controls to examine each order before entry on a marketplace to prevent the entry of an order which would result in:
  - o the Participant or Access Person exceeding pre-determined credit or capital thresholds,
  - o a client of the Participant exceeding pre-determined credit or other limits assigned by the Participant to that client, or

- o the Participant, Access Person or client of the Participant exceeding pre-determined limits on the value or volume of unexecuted orders for a particular security or class of securities;
- provisions to prevent the entry of an order that is not in compliance with Requirements;<sup>10</sup>
- provisions of immediate order and trade information to compliance staff of the Participant or Access Person; and
- regular post-trade monitoring for compliance with Requirements.

Once established, the Proposed Amendments would require the Participant to review and confirm at least annually, that the risk management and supervisory controls, policies and procedures are adequate, maintained and consistently applied, and that any deficiencies have been documented and remedied promptly.

#### 3.1.2 Authorization to Set or Adjust Risk Management and Supervisory Controls, Policies and Procedures

Given that in certain circumstances, particular controls may be better placed under the direction of another dealer, proposed new subsection (7) of Rule 7.1 would, on a reasonable basis, allow the Participant to authorize an investment dealer to perform on its behalf the setting or adjustment of a specific risk management or supervisory control, policy or procedure to an "investment dealer".<sup>11</sup> Additionally, the Proposed Amendments would provide the same flexibility provided by the ETR with respect to the development or implementation of such controls, and thus a Participant would be permitted to use the services of a third party provider that is independent of each client of the Participant, other than affiliates of the Participant. It is important to note that under the ETR, whether or not a third party solution is utilized, only the Participant is permitted to directly and exclusively set and adjust its supervisory and risk management controls.

Proposed new subsection (8) of Rule 7.1 outlines specific requirements if either an authorization is made to an investment dealer or if a third party provider is utilized. Either situation requires a written agreement that will preclude the investment dealer or third party from providing any other person control over any aspect of the control, policy or procedure. Further, unless the investment dealer subject to the authorization agreement is also a Participant, subsection (8) will preclude any authorization with respect to an account in which the investment dealer or a related entity of the investment dealer holds a direct or indirect interest (other than that of commissions received on transactions or a reasonable fee for the administration of the account).

The policy rationale for permitting a Participant to authorize an investment dealer to perform on its behalf the setting or adjusting of a supervisory and risk management control is the recognition that situations exist where a participant dealer may determine that another investment dealer has a relationship with the ultimate client such that the investment dealer, having better access to information relating to the ultimate client, would be in a position to more effectively set or adjust the control, policy or procedure. As such, the Proposed Amendments only provide for an authorization with respect to accounts where the investment dealer is in fact trading for an ultimate client, and not in circumstances where there is no ultimate client and the trading is being made on a proprietary basis.

Upon entering into a written agreement pursuant to subsection (8), the Proposed Amendments would require disclosure of the name and contact information of the investment dealer or third party to the Market Regulator, as well as any change in this information. The provision of this information will allow the Market Regulator to contact the investment dealer or third party to make enquiries about the application of the controls, policies or procedures to orders or trades in situations when additional information is needed.

If the Participant has authorized to an investment dealer or has utilized the services of a third party provider, the Participant is also required to review and confirm at least annually by the anniversary date of the written agreement with the investment dealer or third party, that the risk management and supervisory controls, policies and procedures are adequate, maintained and consistently applied, that any deficiencies have been documented and remedied promptly, and that the investment dealer or third party remains in compliance with the written agreement.

<sup>&</sup>lt;sup>10</sup> "Requirements" include UMIR, applicable securities regulation, requirements of any self-regulatory organization applicable to the activity of the account and the rules and policies of any marketplace on which the account activity takes place. In particular, a Participant or Access Person that uses an automated order system must have appropriate parameters, policies and procedures to detect, prior to entry, an order that is "clearly erroneous" or "unreasonable" and which would interfere with fair and orderly markets if entered. See "Specific Provisions Applicable to Automated Order Systems".

<sup>&</sup>lt;sup>11</sup> Under the Proposed Amendments, the term "investment dealer" would be interpreted as "an investment dealer for the purposes of National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*".

#### 3.2 Specific Provisions Applicable to Automated Order Systems

In addition to the trading supervision obligations established by proposed amendments to Rule 7.1 described above, proposed new Part 8 to Policy 7.1 sets out specific supervisory provisions related to the use of automated order systems. As noted earlier, the risk management and supervisory controls, policies and procedures should be designed to manage the risk associated with access to one or more marketplaces, and if applicable, the use of any automated order system, by a Participant, Access Person, or any client.

The Proposed Amendments would require that each Participant or Access Person have a level of knowledge and understanding of any automated order system used by the Participant, Access Person or a client of either. This level of knowledge should be sufficient to allow the Participant or Access Person to identify and manage risks associated with the use of the automated order system.

The Proposed Amendments would require each Participant or Access Person to ensure that all automated order systems used by the Participant, any client of the Participant or an Access Person are tested in accordance with prudent business practices both initially before being used for the first time, and at least annually thereafter. This testing must be detailed in a written record in order to clearly demonstrate the testing undertaken by the Participant, Access Person and any third party services utilized to employ the automated order system or the risk management and supervisory controls, policies and procedures.

In establishing the parameters for the monitoring of order flow required under both the ETR and the Proposed Amendments, a Participant or Access Person should consider the strategy or strategies being employed by any automated order systems in use, and the potential market impact of defining such parameters inappropriately. In determining the appropriate scope of the order and trade parameters, policies and procedures the Participant or Access Person should, at a minimum, ensure they are set to prevent an order from exceeding:

- the marketplace thresholds<sup>12</sup> applicable to the marketplace on which the order is entered, or
- the limits publicly disclosed by IIROC for the exercise of the power of a Market Integrity Official under Rule 10.9 of UMIR for the triggering of a single-stock circuit breaker or regulatory intervention for the variation or cancellation of trade.<sup>13</sup>

Generally, it is expected that the risk management and supervisory controls, policies and procedures will be reasonably designed to prevent the entry of orders which would interfere with the operation of fair and orderly markets. The supervision and compliance procedures adopted by a Participant or Access Person should if applicable, contain detailed guidance on how the testing of client orders and trades is to be conducted to ensure that each automated order system is tested assuming various market conditions both initially and on at least an annual basis going forward.

Each Participant or Access Person must also have the capability to immediately disable any automated order system used by themselves or any client of the Participant, and thus prevent any orders generated by such system from reaching a marketplace. This would provide the Participant or Access Person the ability to intervene in the event of a malfunction or a situation where a system was being used improperly. A Participant or Access Person is ultimately responsible for any order entered or any trade executed on a marketplace, and this does not exclude situations where an automated order system malfunctions or is improperly used. Such responsibilities include situations where a malfunction causes a "runaway" algorithm even if the malfunction is attributed to an aspect of the automated order system that could not be accessed by the Participant or Access Person for purposes of testing.

#### 3.3 Variation, Cancellation and Correction of Trades

Currently, Rule 7.11 prevents the cancellation or variation in price, volume or settlement date of an executed trade except in specific circumstances. Part 4 of the ETR sets out specific rules detailing when a marketplace can cancel, vary or correct a trade, and as such the language of Rule 7.11 is proposed to be amended to reflect this new framework. It will now provide for the correction of a trade in addition to the cancellation and variation, and also stipulate that a marketplace can only take such actions:

• with the prior consent of the Market Regulator if the variation, cancellation or correction is necessary to correct an error caused by:

<sup>&</sup>lt;sup>12</sup> For further information on "marketplace thresholds" see IIROC Notice 12-0162 – Rules Notice – Request for Comments – UMIR – *Request for Comments on Marketplace Thresholds* (May 10, 2012).

<sup>&</sup>lt;sup>13</sup> For further information see IIROC Notice IIROC Notice 12-040 – Rules Notice – Guidance Note – UMIR – *Guidance Respecting Implementation of Single-Stock Circuit Breakers* (February 2, 2012) and IIROC Notice 12-0112 – Rules Notice – Request for Comments – UMIR – *Proposed Guidance on Regulatory Intervention for the Variation or Cancellation of Trades* (March 30, 2012).

- o a system or technological malfunction of the marketplace itself, or
- o an individual acting on behalf of the marketplace; or
- with notice to the Market Regulator immediately following the variation, cancellation or correction:
  - o prior to the settlement of the trade by:
    - the marketplace at the request of a party to the trade and with the consent of each Participant or Access Person that is a party to the trade, or
    - the clearing agency through which the trade is or was to be cleared and settled, and
  - o after the settlement of the trade, by each Participant and Access Person that is a party to the trade.

#### 3.4 Gatekeeper Obligations with Respect to Electronic Trading

As previously noted, under the Proposed Amendments, Rule 7.1 of UMIR would allow for a Participant to authorize an investment dealer to perform on its behalf the setting or adjusting of a specific risk management or supervisory control, policy or procedure to an investment dealer, or to utilize the services of a third party provider. Proposed new Rule 10.17 of UMIR establishes certain gatekeeper obligations, and will require that in either of the above situations, the Participant must notify the Market Regulator if either the written agreement which sets out the terms of such arrangements has been terminated, or if the Participant has reason to believe that the investment dealer or third party has failed to remedy any deficiency identified by the Participant in its regular review.

#### 3.5 Editorial and Consequential Amendments

The Proposed Amendments would make several editorial or consequential amendments including:

- adding a definition of ETR to Rule 1.1;
- adding clause (c) to Rule 1.2 to note that every term used in UMIR which is defined or interpreted in the ETR (particularly, "automated order system", "marketplace and regulatory requirements" and "participant dealer") has the meaning ascribed to it in the ETR;
- deleting phrases in Part 1 of Policy 7.1 to reflect the new rule framework in place under the ETR; and
- adding language to Part 1 of Policy 7.1 to reflect proposed guidance on the use of the "short-marking exempt" designation.<sup>14</sup>

#### 4. Summary of the Impact of the Proposed Amendments

The following is a summary of the most significant impacts of the adoption of the Proposed Amendments. The Proposed Amendments would:

- ensure that Participants and Access Persons adopt, document and maintain a system of risk management and supervisory controls, policies and procedures reasonably designed to manage the risks associated with electronic trading and access to marketplaces;
- ensure that Participants and Access Persons are effectively supervising trading activity and are accounting for the risks associated with electronic access to marketplaces in their supervisory and compliance monitoring procedures; and
- require an appropriate level of understanding, ongoing testing and appropriate monitoring of any automated order systems in use by a Participant, any client of the Participant or an Access Person.

If the Proposed Amendments are adopted, Access Persons would have to specifically introduce risk management and supervisory controls, policies and procedures with respect to their direct trading on a marketplace as an Access Person (and not through a Participant). This will parallel a requirement on Access Persons introduced in the ETR. However, Access Persons

<sup>&</sup>lt;sup>14</sup> For further information, see IIROC Notice 12-0079 – Rules Notice – Request for Comments – UMIR – *Proposed Guidance on "Short Sale"* and "Short-Marking Exempt" Order Designations (March 2, 2012).

presently only have access to one marketplace which operates as a "negotiation" dark pool marketplace. The requirement will have little practical impact on an Access Person unless they become a subscriber to a new marketplace that is transparent.

There may be impacts to the market in the form of minimal additional latency on some order flow. Any additional latency will also be dependent on the type of trading strategies in use and the nature of the controls and risk management filters already in place. To the extent that additional latency may result, it is not expected to have a significant impact on the majority of trading. Persons employing trading strategies that rely on ultra-low latency connections may have to re-evaluate how they obtain access to a marketplace.

#### 5. Technological Implications and Implementation Plan

The Proposed Amendments will impose obligations on Participants and Access Persons to ensure that the risks associated with electronic trading are appropriately addressed through the establishment of reasonably designed risk management and supervisory controls, policies and procedures. The Proposed Amendments would require pre-trade automated controls to prevent the entry of orders which would result in either the Participant or Access Person, or any client, exceeding predetermined thresholds which would include credit or capital, as well as limits on the value or volume of unexecuted orders for a particular security or class of securities.

It is expected a registered firm would already establish, maintain and apply policies and procedures that establish a system of controls and supervision sufficient to manage the risks associated with its business in accordance with prudent business practices as required both under section 11.1 of NI 31-103 and under Rule 7.1 and Policy 7.1. Additionally, those firms providing clients with electronic access to marketplaces would already be subject to similar requirements under the access rules of the various marketplaces to which the Participant or Access Person directs orders. Technology work and associated costs will likely be required, but the extent of these costs will vary dependent on the level of sophistication of current practices, and the nature of the business activities of the Participant or Access Person.

IIROC would expect that, if the Proposed Amendments are approved by the Recognizing Regulators, the amendments would become effective on the date IIROC publishes notice of approval of the amendments, and the implementation date will be the later of:

- March 1, 2013, the date the ETR becomes effective; and
- 120 days following the publication of notice of approval of the amendments.

#### Appendix A – Provisions Respecting Electronic Trading

The Universal Market Integrity Rules are hereby amended as follows:

- 1. Rule 1.1 is amended by adding the following definition of "Electronic Trading Rules":
  - "Electronic Trading Rules" means National Instrument 23-103 *Electronic Trading* as amended, supplemented and in effect from time to time.
- 2. Rule 1.2 is amended by:
  - (a) deleting the word "and" at the end of clause (b);
  - (b) renumbering clause (c) of subsection (1) as clause (d), and
  - (c) inserting the following as clause (c) of subsection (1):
    - (c) defined or interpreted in the Electronic Trading Rules has the meaning ascribed to it in that National Instrument.
- 3. Rule 7.1 is amended by adding the following subsections:
  - (6) Notwithstanding any other provision of this Rule, a Participant or an Access Person shall adopt, document and maintain a system of risk management and supervisory controls, policies and procedures reasonably designed, in accordance with prudent business practices, to ensure the management of the financial, regulatory and other risks associated with:
    - (a) access to one or more marketplaces; and
    - (b) if applicable, the use by the Participant, any client of the Participant or the Access Person of an automated order system.
  - (7) A Participant may, on a reasonable basis:
    - (a) authorize an investment dealer to perform on its behalf the setting or adjusting of a specific risk management or supervisory control, policy or procedure; or
    - (b) use the services of a third party that provides risk management and supervisory controls, policies and procedures.
  - (8) An authorization over the setting or adjusting of a specific risk management or supervisory control, policy or procedure or retaining the services of a third party under subsection (7) must be in a written agreement with the investment dealer or third party that;
    - (a) precludes the investment dealer or third party from providing any other person control over any aspect of the specific risk management or supervisory control, policy or procedure;
    - (b) unless the authorization is to an investment dealer that is a Participant, precludes the authorization to the investment dealer over the setting or adjusting of a specific risk management or supervisory control, policy or procedure respecting an account in which the investment dealer or a related entity of the investment dealer holds a direct or indirect interest other than an interest in the commission charged on a transaction or reasonable fee for the administration of the account; and
    - (c) precludes the use of a third party unless the third party is independent of each client of the Participant other than affiliates of the Participant.
  - (9) A Participant shall forthwith notify the Market Regulator:
    - (a) upon entering into a written agreement with an investment dealer or third party described in subsection (8), of:
      - (i) the name of the investment dealer or third party, and

- (ii) the contact information for the investment dealer or the third party which will permit the Market Regulator to deal with the investment dealer or third party immediately following the entry of an order or execution of a trade for which the Market Regulator wants additional information; and
- (b) of any change in the information described in clause (a).
- (10) The Participant shall review and confirm:
  - (a) at least annually that:
    - (i) the risk management and supervisory controls, policies and procedures under subsection (6) are adequate,
    - (ii) the Participant has maintained and consistently applied the risk management and supervisory controls, policies and procedures since the establishment of the controls, policies and procedures or the date of the last annual review, and
    - (iii) any deficiency in the adequacy of a control, policy or procedure has been documented and promptly remedied;
  - (b) if the Participant has authorized an investment dealer to perform on its behalf the setting or adjusting of a specific risk management or supervisory control, policy or procedure or retained the services of a third party, at least annually by the anniversary date of the written agreement with the investment dealer or third party that:
    - (i) the risk management and supervisory controls, policies and procedures adopted by the investment dealer or third party under subsection (6) are adequate,
    - (ii) the investment dealer or third party has maintained and consistently applied the risk management and supervisory controls, policies and procedures since the establishment of the controls, policies and procedures or the date of the last annual review, and
    - (iii) any deficiency in the adequacy of a control, policy or procedure has been documented by the Participant and promptly remedied by the investment dealer or third party, and
    - (iv) the investment dealer or third party is in compliance with the written agreement with the Participant.
- 4. Rule 7.11 is amended by:
  - (a) inserting in the title the words " and Correction" after the word "Cancellation";
  - (b) inserting in clause (b) the phrase "or corrected" immediately following the word "varied";
  - (c) deleting clause (d) and inserting the following clauses:
    - (d) with the prior consent of the Market Regulator, if the variation, cancellation or correction would be necessary to correct an error caused by a system or technological malfunction of the marketplaces systems or equipment or caused by an individual acting on behalf of the marketplace; or
    - (e) with notice to the Market Regulator immediately following the variation, cancellation or correction of the trade in such form and manner as may be required by the Market Regulator and such notice shall be given, if the variation, cancellation or correction is made:
      - (i) prior to the settlement of the trade, by:
        - (A) the marketplace on which the trade was executed at the request of a party to the trade and with the consent of each Participant and Access Person that is a party to the trade, or

- (B) the clearing agency through which the trade is or was to be cleared and settled, and
- (ii) after the settlement of the trade, by each Participant and Access Person that is a party to the trade.
- 5. Part 10 is amended by adding the following as Rule 10.17:

#### Gatekeeper Obligations with Respect to Electronic Trading

- (1) A Participant that has, under Rule 7.1, authorized an investment dealer to perform on its behalf the setting or adjusting of a specific risk management or supervisory control, policy or procedure or the provision of risk management or supervisory controls, policies and procedures to a third party shall forthwith report to the Market Regulator the fact that:
  - (a) the written agreement with the investment dealer or third party has been terminated; or
  - (b) the Participant knows or has reason to believe that the investment dealer or third party has failed to promptly remedy any deficiency identified by the Participant.

The Policies to the Universal Market Integrity Rules are hereby amended as follows:

- 1. Part 1 of Policy 7.1 is amended by:
  - (a) replacing at the start of the seventh paragraph the word "Where" with the word "When";
  - (b) deleting in the seventh paragraph the phrase "(for example by a client with a systems interconnect arrangement in accordance with Policy 2-501 of the Toronto Stock Exchange)";
  - (c) adding at the end of the third bullet of the eight paragraph the phrase "other than a client required to use the "short-marking exempt" designation"; and
  - (d) deleting at the end of the fourth bullet of the eighth paragraph the phrase "(unless the trading system of the Participant restricts trading activities in affected securities".
- 2. Part 2 of Policy 7.1 is amended by:
  - (a) deleting the phrases "Participants are reminded that", "the entry of", and "(For example, for Participants that are Participating Organizations of the TSE, reference should be made to the Policy on "Connection of Eligible Clients of Participating Organizations)"; and
  - (b) adding the word "entered" immediately before the phrase "must comply".
- 3. Part 3 of Policy 7.1 is amended in respect of the table of Minimum Compliance Procedures for Trading Supervision UMIR and Policies by:
  - (a) adding reference to "Electronic Access to Marketplaces", "Rule 7.1" and "Securities Legislation" and associated compliance review procedures;
  - (b) amending the term "restricted list" to "restricted security";
  - (c) amending the term "firm restricted list" to "firm trading restriction"; and
  - (d) deleting references to Rule 7.8 and Rule 7.9 and substituting reference to Rule 7.7 in regard to "restricted issues".
- 4. Policy 7.1 is further amended by adding the following Parts:

#### Part 7 – Specific Provisions Applicable to Direct Electronic Access

Trading supervision related to electronic access to marketplaces must be performed by a Participant or Access Person in accordance with a documented system of risk management and supervisory controls, policies and procedures reasonably designed to ensure the management of the financial, regulatory and other risks associated with electronic access to marketplaces.

The risk management and supervisory controls, policies and procedures employed by a Participant or Access Persons must include:

- automated controls to examine each order before entry on a marketplace to prevent the entry of an
  order which would result in:
  - o the Participant or Access Person exceeding pre-determined credit or capital thresholds,
  - o a client of the Participant exceeding pre-determined credit or other limits assigned by the Participant or to that client, or
  - o the Participant, Access Person or client of the Participant exceeding pre-determined limits on the value or volume of unexecuted orders for a particular security or class of securities;
- provision to prevent the entry of an order this is not in compliance with Requirements;
- provision of immediate order and trade information to compliance staff of the Participant or Access Person; and
- regular post-trade monitoring for compliance with Requirements.

A Participant or Access Person is responsible and accountable for all functions that they outsource to a service provider as set out in Part 11 of Companion Policy 31-103CP *Registration Requirements and Exemptions*.

Supervisory and compliance monitoring procedures must be designed to detect and prevent account activity that is or may be a violation of Requirements which includes applicable securities legislation, requirements of any self-regulatory organization applicable to the account activity and the rules and policies of any marketplace on which the account activity takes place. These procedures must include "post-order entry" compliance testing enumerated under Part 1 of Policy 7.1 to detect orders that are not in compliance with specific rules, and by addressing steps to monitor trading activity, as provided under Part 5 of Policy 7.1, of any person who has multiple accounts, with the Participant and other accounts in which the person has an interest or over which the person has direction or control.

#### Part 8 – Specific Provisions Applicable to Automated Order Systems

Trading supervision by a Participant or Access Person must be in accordance with a documented system of risk management and supervisory controls, policies and procedures reasonably designed to ensure the management of the financial, regulatory and other risks associated with the use of an automated order system by the Participant, the Access Person or any client of the Participant.

Each Participant or Access Person must have a level of knowledge and understanding of any automated order system used by the Participant, the Access Person or any client of the Participant that is sufficient to allow the Participant or Access Person to identify and manage the risks associated with the use of the automated order system.

The Participant or Access Person must ensure that every automated order system used by the Participant, the Access Person or any client of the Participant is tested in accordance with prudent business practices initially before use and at least annually thereafter. A written record must be maintained with sufficient details to demonstrate the testing of the automated order system undertaken by the Participant, Access Person and any third party employed to provide the automated order system or risk management or supervisory controls, policies and procedures.

The scope of appropriate order and trade parameters, policies and procedures should be tailored to the strategy or strategies being pursued by an automatic order system with due consideration to the potential market impact of defining such parameters too broadly and in any event must be set so as not to exceed the marketplace thresholds applicable to the marketplace on which the order is entered or would otherwise exceed the limits publicly disclosed by the Market Regulator for the exercise of the power of a Market Integrity Official under Rule 10.9 of UMIR.

The Market Regulator expects the risk management and supervisory controls, policies and procedures to comply with the Electronic Trading Rules and be reasonably designed to prevent the entry of any order that would interfere with fair and orderly markets. This includes adoption of compliance procedures for trading by clients, if applicable, containing detailed guidance on how testing of client orders and trades is to be conducted to ensure that prior to engagement and at least annually thereafter, each automated order system is satisfactorily tested assuming various market conditions. In addition to regular testing of the automated order systems, preventing interference with fair and orderly markets requires development of pre-programmed internal parameters to prevent or "flag" with alerts on a real-time basis, the entry of orders and execution of trades by an automated order system that exceed certain volume, order, price or other limits.

Each Participant or Access Person must have the ability to immediately override or disable automatically any automated order system and thereby prevent orders generated by the automated order system from being entered on any marketplace.

Notwithstanding any outsourcing or authorization over of risk management and supervision controls, a Participant or Access Person is responsible for any order entered or any trade executed on a marketplace, including any order or trade resulting from the improper operation or malfunction of the automated order system. This responsibility includes instances in which the malfunction which gave rise to a "runaway" algorithm is attributed to an aspect of the algorithm or automated order system that was not "accessible" to the Participant or Access Person for testing.

| Text of Provision Following Adoption of the Proposed<br>Amendments  | Text of Current Provisions Marked to Reflect<br>Adoption of the Proposed Amendments   |
|---|---|
| 1.1 Definitions   | 1.1 Definitions   |
| <b>"Electronic Trading Rules"</b> means National Instrument 23-103 <i>Electronic Trading</i> as amended, supplemented and in effect from time to time.  | <b>"Electronic Trading Rules"</b> means National Instrument 23-<br>103 <i>Electronic Trading</i> as amended, supplemented and in<br>effect from time to time.   |
| 1.2 Interpretation  | 1.2 Interpretation  |
| <ol> <li>Unless otherwise defined or interpreted, every term<br/>used in UMIR that is:</li> </ol>   | (1) Unless otherwise defined or interpreted, every term used in UMIR that is:   |
| <ul> <li>(a) defined in subsection 1.1(3) of National Instrument<br/>14-101<i>Definitions</i> has the meaning ascribed to it in<br/>that subsection;</li> </ul>   | <ul> <li>(a) defined in subsection 1.1(3) of National Instrument<br/>14-101 <i>Definitions</i> has the meaning ascribed to it in<br/>that subsection;</li> </ul>  |
| <ul> <li>(b) defined or interpreted in the Marketplace Operation<br/>Instrument has the meaning ascribed to it in that<br/>National Instrument;</li> </ul>  | <ul> <li>(b) defined or interpreted in the Marketplace Operation<br/>Instrument has the meaning ascribed to it in that<br/>National Instrument;</li> </ul>  |
| <ul> <li>(c) defined or interpreted in the Electronic Trading<br/>Rules has the meaning ascribed to it in that<br/>National Instrument; and</li> </ul>  | <ul> <li>(c) defined or interpreted in the Electronic Trading<br/>Rules has the meaning ascribed to it in that<br/>National Instrument; and</li> </ul>  |
| (d) a reference to a requirement of an Exchange or a<br>QTRS shall have the meaning ascribed to it in the<br>applicable Marketplace Rule.   | <ul> <li>(d) a reference to a requirement of an Exchange or a<br/>QTRS shall have the meaning ascribed to it in the<br/>applicable Marketplace Rule.</li> </ul>   |
| 7.1 Trading Supervision Obligations   | 7.1 Trading Supervision Obligations   |
|   |   |
| (6) Notwithstanding any other provision of this Rule, a<br>Participant or an Access Person shall adopt, document<br>and maintain a system of risk management and<br>supervisory controls, policies and procedures<br>reasonably designed, in accordance with prudent<br>business practices, to ensure the management of the<br>financial, regulatory and other risks associated with: | (6) Notwithstanding any other provision of this Rule, a<br>Participant or an Access Person shall adopt, document<br>and maintain a system of risk management and<br>supervisory controls, policies and procedures<br>reasonably designed, in accordance with prudent<br>business practices, to ensure the management of the<br>financial, regulatory and other risks associated with: |
| (a) access to one or more marketplaces; and   | (a) access to one or more marketplaces; and   |
| (b) if applicable, the use by the Participant, any client<br>of Participant or the Access Person of an<br>automated order system.   | (b) if applicable, the use by the Participant, any client<br>of the Participant or the Access Person of an<br>automated order system.   |
| (7) A Participant may, on a reasonable basis:   | (7) A Participant may, on a reasonable basis:   |
| <ul> <li>(a) authorize an investment dealer on its behalf the setting or adjusting of a specific risk management or supervisory control, policy or procedure; or</li> </ul>   | <ul> <li>(a) authorize an investment dealer to perform on its<br/>behalf the setting or adjusting of a specific risk<br/>management or supervisory control, policy or<br/>procedure; or</li> </ul>  |
| (b) use the services of a third party that provides risk<br>management and supervisory controls, policies<br>and procedures.  | (b) use the services of a third party that provides risk<br>management and supervisory controls, policies and<br>procedures.  |
| (8) An authorization over the setting or adjusting of a<br>specific risk management or supervisory control, policy<br>or procedure or retaining the services of a third party<br>under subsection (7) must be in a written agreement<br>with the investment dealer or third party that;   | (8) An authorization over the setting or adjusting of a<br>specific risk management or supervisory control, policy<br>or procedure or retaining the services of a third party<br>under subsection (7) must be in a written agreement<br>with the investment dealer or third party that;   |

#### Appendix B – Text of UMIR to Reflect Proposed Amendments Respecting Electronic Trading

|     | kt of<br>Iend |  | vision Following Adoption of the Proposed<br>ts   |         | of Current Provisions Marked to Reflect<br>tion of the Proposed Amendments   |
|-----|---------------|--|---|---------|--|
|     | (a)           | pro<br>of t  | cludes the investment dealer or third party from<br>viding any other person control over any aspect<br>ne specific risk management or supervisory<br>trol, policy or procedure;   | (a)     | <ul> <li>a) precludes the investment dealer or third party from<br/>providing any other person control over any aspect<br/>of the specific risk management or supervisory<br/>control, policy or procedure;</li> </ul>   |
|     | (b)           | that<br>the<br>of a<br>con<br>in v<br>the<br>inte<br>cha | ess the authorization is to an investment dealer<br>t is a Participant, precludes the authorization to<br>investment dealer over the setting or adjusting<br>a specific risk management or supervisory<br>trol, policy or procedure respecting an account<br>which the investment dealer or a related entity of<br>investment dealer holds a direct or indirect<br>rest other than an interest in the commission<br>rged on a transaction or reasonable fee for the<br>ninistration of the account; and | (b)     | b) unless the authorization is to an investment dealer<br>that is a Participant, precludes the authorization to<br>the investment dealer over the setting or adjusting<br>of a specific risk management or supervisory<br>control, policy or procedure respecting an account<br>in which the investment dealer or a related entity of<br>the investment dealer holds a direct or indirect<br>interest other than an interest in the commission<br>charged on a transaction or reasonable fee for the<br>administration of the account; and |
|     | (c)           | par  | cludes the use of a third party unless the third<br>ty is independent of each client of the<br>ticipant other than affiliates of the Participant.   | (c)     | <ul> <li>precludes the use of a third party unless the third<br/>party is independent of each client of the<br/>Participant other than affiliates of the Participant.</li> </ul>   |
| (9) | ΑP            | artic  | ipant shall forthwith notify the Market Regulator:  | (9) A F | Participant shall forthwith notify the Market Regulator:   |
|     | (a)           | inve   | n entering into a written agreement with an<br>estment dealer or third party described in<br>section (8), of:   | (a)     | <ul> <li>upon entering into a written agreement with an<br/>investment dealer or third party described in<br/>subsection (8), of:</li> </ul>   |
|     |               | (i)  | the name of the investment dealer or third party, and   |         | <ul> <li>the name of the investment dealer or third party, and</li> </ul>  |
|     |               | (ii)   | the contact information for the investment<br>dealer or the third party which will permit the<br>Market Regulator to deal with the investment<br>dealer or third party immediately following the<br>entry of an order or execution of a trade for<br>which the Market Regulator wants additional<br>information; and  |         | <ul> <li>(ii) the contact information for the investment<br/>dealer or the third party which will permit the<br/>Market Regulator to deal with the investment<br/>dealer or third party immediately following the<br/>entry of an order or execution of a trade for<br/>which the Market Regulator wants additional<br/>information; and</li> </ul>  |
|     | (b)           |  | ny change in the information described in use (a).  | (b)     | <ul> <li>of any change in the information described in<br/>clause (a).</li> </ul>  |
|     |               | (10)   | The Participant shall review and confirm:   | (10)The | ne Participant shall review and confirm:   |
|     |               | (a)  | at least annually that:   | (a)     | ) at least annually that:  |
|     |               | (i)  | the risk management and supervisory controls, policies and procedures under subsection (6) are adequate,  |         | <ul> <li>the risk management and supervisory controls,<br/>policies and procedures under subsection (6)<br/>are adequate,</li> </ul>   |
|     |               | (ii)   | the Participant has maintained and<br>consistently applied the risk management and<br>supervisory controls, policies and procedures<br>since the establishment of the controls,<br>policies and procedures or the date of the last<br>annual review, and  |         | <ul> <li>(ii) the Participant has maintained and consistently<br/>applied the risk management and supervisory<br/>controls, policies and procedures since the<br/>establishment of the controls, policies and<br/>procedures or the date of the last annual<br/>review, and</li> </ul>   |
|     |               | (iii)  | any deficiency in the adequacy of a control,<br>policy or procedure has been documented and<br>promptly remedied;   |         | <ul> <li>(iii) any deficiency in the adequacy of a control,<br/>policy or procedure has been documented and<br/>promptly remedied;</li> </ul>  |

| Text of Provisi<br>Amendments               | ion Following Adoption of the Proposed   | Text of Current Provisions Marked to Reflect<br>Adoption of the Proposed Amendments   |
|---|--|---|
| de<br>ad<br>su<br>inv<br>thi<br>da          | the Participant has authorized an investment<br>ealer to perform on its behalf the setting or<br>djusting of a specific risk management or<br>upervisory control, policy or procedure to an<br>vestment dealer or retained the services of a<br>ird party, at least annually by the anniversary<br>ate of the written agreement with the<br>vestment dealer or third party that: | (b) if the Participant has authorized an investment<br>dealer to perform on its behalf the setting or<br>adjusting of a specific risk management or<br>supervisory control, policy or procedure to an<br>investment dealer or retained the services of a third<br>party, at least annually by the anniversary date of<br>the written agreement with the investment dealer or<br>third party that: |
| po  | e risk management and supervisory controls,<br>blicies and procedures adopted by the<br>vestment dealer or third party under<br>ubsection (6) are adequate,  | <ul> <li>the risk management and supervisory controls,<br/>policies and procedures adopted by the<br/>investment dealer or third party under<br/>subsection (6) are adequate,</li> </ul>  |
| ma<br>po<br>es<br>pr                        | e investment dealer or third party has<br>aintained and consistently applied the risk<br>anagement and supervisory controls,<br>blicies and procedures since the<br>stablishment of the controls, policies and<br>occedures or the date of the last annual<br>view, and  | <ul> <li>(ii) the investment dealer or third party has<br/>maintained and consistently applied the risk<br/>management and supervisory controls, policies<br/>and procedures since the establishment of the<br/>controls, policies and procedures or the date of<br/>the last annual review, and</li> </ul>   |
| pc<br>the                                   | ny deficiency in the adequacy of a control,<br>olicy or procedure has been documented by<br>e Participant and promptly remedied by the<br>vestment dealer or third party, and  | <ul> <li>(iii) any deficiency in the adequacy of a control,<br/>policy or procedure has been documented by<br/>the Participant and promptly remedied by the<br/>investment dealer or third party, and</li> </ul>  |
| CO  | e investment dealer or third party is in<br>ompliance with the written agreement with the<br>articipant.   | (iv) the investment dealer or third party is in<br>compliance with the written agreement with<br>the Participant.   |
| 7.11 Variation                              | n, Cancellation and Correction of Trades   | 7.11 Variation, Cancellation and Correction of Trades   |
| No trade execution of the execution of      | ted on a marketplace shall, subsequent to<br>f the trade, be:  | No trade executed on a marketplace shall, subsequent to the execution of the trade, be:   |
| (a) cancelled;                              | or   | (a) cancelled; or   |
| (b) varied or co                            | orrected with respect to:  | (b) varied or corrected with respect to:  |
| (i) the pri-                                | ce of the trade,   | (i) the price of the trade,   |
| (ii) the vol                                | lume of the trade, or  | (ii) the volume of the trade, or  |
| (iii) the da                                | te for settlement of the trade,  | (iii) the date for settlement of the trade,   |
| except:                                     |  | except:   |
| (c) by the Mar                              | ket Regulator in accordance with UMIR;   | (c) by the Market Regulator in accordance with UMIR;  |
| variation, c<br>to correct a<br>malfunctior | ior consent of the Market Regulator, if the<br>cancellation or correction would be necessary<br>an error caused by a system or technological<br>n of the marketplace's systems or equipment<br>by an individual acting on behalf of the<br>ce; or  | (d) with the prior consent of the Market Regulator, if the<br>variation, cancellation or correction would be<br>necessary to correct an error caused by a system or<br>technological malfunction of the marketplace's<br>systems or equipment or caused by an individual<br>acting on behalf of the marketplace; or   |
| following th                                | to the Market Regulator immediately<br>ne variation, cancellation or correction of the<br>ch form and manner as may be required by   | (e) with notice to the Market Regulator immediately<br>following the variation, cancellation or correction of the<br>trade in such form and manner as may be required by  |

| Text of Provision Following Adoption of the Proposed  | Text of Current Provisions Marked to Reflect  |
|---|---|
| Amendments  | Adoption of the Proposed Amendments   |
| the Market Regulator and such notice shall be given, if the variation, cancellation or correction is made:  | the Market Regulator and such notice shall be given, if the variation, cancellation or correction is made:  |
| (i) prior to the settlement of the trade, by:   | (i) prior to the settlement of the trade, by:   |
| (A) the marketplace on which the trade was  | (A) the marketplace on which the trade was  |
| executed at the request of a party to the trade   | executed at the request of a party to the trade   |
| and with the consent of each Participant and  | and with the consent of each Participant and  |
| Access Person that is a party to the trade, or  | Access Person that is a party to the trade, or  |
| (B) the clearing agency through which the trade is  | (B) the clearing agency through which the trade is  |
| or was to be cleared and settled, and   | or was to be cleared and settled, and   |
| <ul> <li>(ii) after the settlement of the trade, by each</li></ul>  | <ul> <li>(ii) after the settlement of the trade, by each</li></ul>  |
| Participant and Access Person that is a party to the  | Participant and Access Person that is a party to the  |
| trade.  | trade.  |
| 10.17 Gatekeeper Obligations with Respect to  | 10.17 Gatekeeper Obligations with Respect to  |
| Electronic Trading  | Electronic Trading  |
| (1) A Participant that has, under Rule 7.1, authorized an   | (1) A Participant that has, under Rule 7.1, authorized an   |
| investment dealer to perform on its behalf the setting or   | investment dealer to perform on its behalf the setting or   |
| adjusting of a specific risk management or supervisory  | adjusting of a specific risk management or supervisory  |
| control, policy or procedure to an investment dealer or   | control, policy or procedure to an investment dealer or   |
| the provision of risk management or supervisory   | the provision of risk management or supervisory   |
| controls, policies and procedures to a third party shall  | controls, policies and procedures to a third party shall  |
| forthwith report to the Market Regulator the fact that:   | forthwith report to the Market Regulator the fact that:   |
| <ul> <li>(a) the written agreement with the investment dealer or</li></ul>  | <ul> <li>(a) the written agreement with the investment dealer or</li></ul>  |
| third party has been terminated; or   | third party has been terminated; or   |
| (b) the Participant knows or has reason to believe that   | (b) the Participant knows or has reason to believe that   |
| the investment dealer or third party has failed to  | the investment dealer or third party has failed to  |
| promptly remedy any deficiency identified by the  | promptly remedy any deficiency identified by the  |
| Participant.  | Participant.  |
| Policy 7.1 – Trading Supervision Obligations  | Policy 7.1 – Trading Supervision Obligations  |
| Part 1 – Responsibility for Supervision and Compliance  | Part 1 – Responsibility for Supervision and Compliance  |
|   |   |
| In performing the trading supervision obligations, the<br>Participant will act as a "gatekeeper" to help prevent and<br>detect violations of applicable Requirements. | In performing the trading supervision obligations, the Participant will act as a "gatekeeper" to help prevent and detect violations of applicable Requirements. |
| When an order is entered on a marketplace without the   | When an order is entered on a marketplace without the   |
| involvement of a trader, the Participant retains responsibility   | involvement of a trader the Participant retains responsibility  |
| for that order and the supervision policies and procedures  | for that order and the supervision policies and procedures  |
| should adequately address the additional risk exposure  | should adequately address the additional risk exposure  |
| which the Participant may have for orders that are not  | which the Participant may have for orders that are not  |
| directly handled by staff of the Participant. For example, it   | directly handled by staff of the Participant. For example, it   |
| may be appropriate for the Participant to sample for  | may be appropriate for the Participant to sample for  |
| compliance testing a higher percentage of orders that have  | compliance testing a higher percentage of orders that have  |
| been entered directly by clients than the percentage of   | been entered directly by clients than the percentage of   |
| orders sampled in other circumstances.  | orders sampled in other circumstances.  |
| In addition, the "post-order entry" compliance testing should   | In addition, the "post-order entry" compliance testing should   |
| recognize that the limited involvement of staff of the  | recognize that the limited involvement of staff of the  |
| Participant in the entry of orders by a direct access client  | Participant in the entry of orders by a direct access-client  |
| may restrict the ability of the Participant to detect orders that   | may restrict the ability of the Participant to detect orders that   |

| Text of Provision Following A<br>Amendments   | doption of the                      | Proposed   |   | nt Provisions N<br>he Proposed A   | larked to Reflec<br>mendments  | t                                  |  |
|---|-------------------------------------|--|---|--|--|------------------------------------|--|
| are not in compliance with specific rules. For example,<br>"post-order entry" compliance testing may be focused on<br>whether an order entered by a direct access client:   |                                     |  | are not in compliance with specific rules. For example,<br>"post-order entry" compliance testing may be focused on<br>whether an order entered by a direct access-client:   |  |  |                                    |  |
| <ul> <li>has created an artificial price contrary to Rule 2.2;</li> </ul>   |                                     |  | • has created an artificial price contrary to Rule 2.2;   |  |  |                                    |  |
| <ul> <li>is part of a "wash trade<br/>the client has more tha<br/>Participant);</li> </ul>  |                                     |  | <ul> <li>is part of a "wash trade" (in circumstances where<br/>the client has more than one account with the<br/>Participant);</li> </ul>   |  |  |                                    |  |
| <ul> <li>is an unmarked short sale (if the trading system of<br/>the Participant does not automatically code as<br/>"short" any sale of a security not then held in the<br/>account of the client other than a client required to<br/>use the "short-marking exempt" designation); and</li> </ul>   |                                     |  | <ul> <li>is an unmarked short sale (if the trading system of<br/>the Participant does not automatically code as<br/>"short" any sale of a security not then held in the<br/>account of the client other than a client required to<br/>use the "short-marking exempt" designation); and</li> </ul> |  |  |                                    |  |
| <ul> <li>has complied with other<br/>requirements and in particular<br/>mark an order as from<br/>shareholder.</li> </ul>   | in pa                               | ticular the requi  | der marking requi<br>rement to mark a<br>nificant shareholo   | n order as   |  |                                    |  |
| Policy 7.1 – Trading Supervis   | ion Obligations                     | ;  | Policy 7.1 – T  | rading Supervi   | sion Obligations   | 5                                  |  |
| Part 2 – Minimum Element of a Supervision System  |                                     |  | Part 2 – Minimum Element of a Supervision System  |  |  |                                    |  |
|   |                                     |  |   |  |  |                                    |  |
| The Market Regulator recognizes that there is no one<br>supervision system that will be appropriate for all<br>Participants. Given the differences among firms in terms of<br>their size, the nature of their business, whether they are<br>engaged in business in more than one location or<br>jurisdiction, the experience and training of its employees<br>and the fact that effective jurisdiction can be achieved in a<br>variety of ways, this Policy does not mandate any particular<br>type or method of supervision of trading activity.<br>Furthermore, compliance with this Policy does not relieve<br>Participants from complying with specific Requirements that<br>may apply in certain circumstances. In particular, in<br>accordance with subsection (2) of Rule 10.1, orders entered<br>(including orders entered by a client, an investment dealer<br>under a routing arrangement or by a client through an order<br>execution services) must comply with the Marketplace<br>Rules on which the order is entered and the Marketplace<br>Rules on which the order is executed. |                                     | supervision sy<br>Participants. O<br>their size, the<br>engaged in bu<br>jurisdiction, the<br>and the fact th<br>variety of way<br>type or metho<br>Furthermore, o<br>Participants fr<br>may apply in o<br>accordance w<br>must comply w | stem that will be<br>Biven the different<br>nature of their business in more to<br>experience and<br>at effective jurists<br>s, this Policy doe<br>d of supervision<br>compliance with<br>om complying w<br>certain circumstation (2)<br>with the Marketpl  | zes that there is r<br>a appropriate for a<br>nces among firms<br>usiness, whether<br>han one location<br>d training of its er<br>diction can be ac<br>es not mandate a<br>of trading activity<br>this Policy does r<br>ith specific Requi<br>nces. In particula<br>c) of Rule 10.1, or<br>lace Rules on which | all<br>s in terms of<br>they are<br>or<br>mployees<br>hieved in a<br>ny particular<br>r.<br>not relieve<br>rements that<br>ar, in<br>ders entered<br>ich the order |                                    |  |
| Policy 7.1 – Trading Supervis   | ion Obligations                     | 6  | Policy 7.1 – T  | rading Supervi   | sion Obligations   | 6                                  |  |
| Part 3 – Minimum Compliance Procedures for Trading  |                                     | Part 3 – Minimum Compliance Procedures for Trading   |   |  |  |                                    |  |
| on a Marketplace  |                                     |  | larketplace   |  | 5  |                                    |  |
| Minimum Compliance<br>Compliance Review<br>Procedures Procedures  | Potential<br>Information<br>Sources | Frequency<br>and<br>Sample<br>Size   | Minimum<br>Compliance<br>Procedures   | Compliance<br>Review<br>Procedures   | Potential<br>Information<br>Sources  | Frequency<br>and<br>Sample<br>Size |  |
|   | Restricted<br>Security<br>Rule 2.2  | <ul> <li>review for<br/>any trading<br/>of restricted<br/>issues<br/>done by</li> </ul>  | <ul> <li>order tickets</li> <li>the diary list</li> <li>trading<br/>blotters</li> </ul>   | • daily  |  |                                    |  |

| Restricted  | review for  | order   | daily                     | Rule 7.7                                     | proprietary  | firm trading                          |                              |
|---|---|---|---------------------------|--|--|---------------------------------------|------------------------------|
| Security  | any trad-   | tickets   | ,                         |  | or   | restriction                           |                              |
|   | ing of  | the diary   |                           |  | employee   | monthly                               |                              |
| Rule 2.2  | restricted  | list  |                           |  | accounts   | statements                            |                              |
| Rule 7.7  | issues<br>done by                                     | <ul> <li>trading<br/>blotters</li> </ul>  |                           | Electronic<br>Access to                      | pre-trade     order                                    | automated                             | • daily                      |
|   | proprie-  | <ul> <li>firm trading</li> </ul>  |                           | Market-                                      | order<br>review:                                       | pre-trade<br>controls                 |                              |
|   | tary or   | restriction   |                           | places                                       | <ul> <li>prevent</li> </ul>                            | <ul> <li>real-time</li> </ul>         |                              |
|   | employee  | <ul> <li>monthly</li> </ul>   |                           |  | entry of   | alert systems                         |                              |
|   | accounts  | statements  |                           | Rules 7.1                                    | orders on  | immediate                             |                              |
| Electronic  | <ul> <li>pre-trade</li> </ul>                         | <ul> <li>automated</li> </ul>   | <ul> <li>daily</li> </ul> |  | an order-by  | order and                             |                              |
| Access to   | order   | pre-trade   |                           | Securities                                   | order basis  | trade                                 |                              |
| Marketplaces  | review:   | controls  |                           | Legislation                                  | that exceed<br>pre-defined                             | information                           |                              |
| Rules 7.1   | prevent   | real-time   |                           |  | price and  | including<br>execution                |                              |
|   | entry of<br>orders on                                 | alert<br>systems  |                           |  | size para-   | reports.                              |                              |
| Securities  | an order-by   | <ul> <li>immediate</li> </ul>   |                           |  | meters;  |                                       |                              |
| Legislation   | order basis   | order and   |                           |  | <ul> <li>prevent</li> </ul>                            |                                       |                              |
|   | that exceed   | trade   |                           |  | entry of   |                                       |                              |
|   | pre-defined   | information   |                           |  | orders that<br>do not                                  |                                       |                              |
|   | price and<br>size para-                               | including<br>execution  |                           |  | comply with  |                                       |                              |
|   | meters;   | reports.  |                           |  | market-  |                                       |                              |
|   | <ul> <li>prevent</li> </ul>                           |   |                           |  | place and  |                                       |                              |
|   | entry of  |   |                           |  | regulatory   |                                       |                              |
|   | orders that   |   |                           |  | require-   |                                       |                              |
|   | do not  |   |                           |  | ments  |                                       |                              |
|   | comply with   |   |                           |  | <ul> <li>systematic<br/>ally prevent</li> </ul>        |                                       |                              |
|   | market-<br>place and                                  |   |                           |  | one or   |                                       |                              |
|   | regulatory  |   |                           |  | more   |                                       |                              |
|   | require-  |   |                           |  | orders from  |                                       |                              |
|   | ments   |   |                           |  | exceeding  |                                       |                              |
|   | <ul> <li>systema-</li> </ul>                          |   |                           |  | pre-   |                                       |                              |
|   | tically   |   |                           |  | determined   |                                       |                              |
|   | prevent   |   |                           |  | credit and capital                                     |                                       |                              |
|   | one or<br>more  |   |                           |  | thresholds.  |                                       |                              |
|   | orders from   |   |                           |  | <ul> <li>monitor for</li> </ul>                        |                                       |                              |
|   | exceeding   |   |                           |  | unauthori-   |                                       |                              |
|   | pre-deter-  |   |                           |  | zed access   |                                       |                              |
|   | mined   |   |                           |  | to trading   |                                       |                              |
|   | credit and  |   |                           |  | systems of<br>Participant                              |                                       |                              |
|   | capital thresholds.                                   |   |                           |  | or Access  |                                       |                              |
|   | <ul> <li>monitor for</li> </ul>                       |   |                           |  | Person.  |                                       |                              |
|   | unauthori-  |   |                           |  |  |                                       |                              |
|   | zed access  |   |                           |  |  |                                       |                              |
|   | to trading  |   |                           |  |  |                                       |                              |
|   | systems of<br>Participant                             |   |                           |  |  |                                       |                              |
|   | or Access   |   |                           |  |  |                                       |                              |
|   | Person.   |   |                           |  |  |                                       |                              |
| olicy 7.1 – Tı  | ading Supervis  | sion Obligation   | S                         | Policy 7.1 – 1                               | Frading Supervi  | sion Obligations                      | ;                            |
|   | fic Provisions<br>ss to Marketpla                     | Applicable to E<br>ces  | lectronic                 |  | cific Provisions<br>less to Marketpla                  | Applicable to Ele                     | ectronic                     |
| Frading supervision related to electronic access to narketplaces must be performed by a Participant or Access |   | Trading supervision related to electronic access to marketplaces must be performed by a Participant or Access |                           |  |  |                                       |                              |
|   | nust be perform                                       | ed by a Participa   | ant or Access             | marketplaces                                 | must be perform  | ied by a Participa                    | nt or Access                 |
| narketplaces r<br>erson in acco<br>nanagement a   | rdance with a do<br>nd supervisory                    | ocumented system controls, policies   | em of risk<br>s and       | Person in acc<br>management                  | ordance with a d<br>and supervisory                    | ocumented syste<br>controls, policies | m of risk<br>and             |
| arketplaces r<br>erson in acco<br>anagement a<br>rocedures rea  | rdance with a do<br>nd supervisory<br>isonably design | ocumented system  | em of risk<br>s and       | Person in acc<br>management<br>procedures re | ordance with a d<br>and supervisory<br>asonably design | ocumented syste                       | m of risk<br>and<br>manageme |

| Text of Provision Following Adoption of the Proposed  | Text of Current Provisions Marked to Reflect  |
|---|---|
| Amendments  | Adoption of the Proposed Amendments   |
| The risk management and supervisory controls, policies and procedures employed by a Participant or Access Persons must include:   | The risk management and supervisory controls, policies and procedures employed by a Participant or Access Persons must include:   |
| <ul> <li>automated controls to examine each order before entry</li></ul>  | <ul> <li>automated controls to examine each order before entry</li></ul>  |
| on a marketplace to prevent the entry of an order which   | on a marketplace to prevent the entry of an order which   |
| would result in:  | would result in:  |
| o the Participant or Access Person exceeding pre-   | o the Participant or Access Person exceeding pre-   |
| determined credit or capital thresholds,  | determined credit or capital thresholds,  |
| <ul> <li>a client of the Participant exceeding pre-determined</li></ul>   | o a client of the Participant exceeding pre-determined  |
| credit or other limits assigned by the Participant to   | credit or other limits assigned by the Participant to   |
| that client, or   | that client, or   |
| <ul> <li>the Participant, Access Person or client of the</li></ul>  | <ul> <li>the Participant, Access Person or client of the</li></ul>  |
| Participant exceeding pre-determined limits on the  | Participant exceeding pre-determined limits on the  |
| value or volume of unexecuted orders for a  | value or volume of unexecuted orders for a  |
| particular security or class of securities;   | particular security or class of securities;   |
| <ul> <li>provision to prevent the entry of an order that is not in compliance with Requirements;</li> </ul>   | <ul> <li>provision to prevent the entry of an order that is not in compliance with Requirements;</li> </ul>   |
| <ul> <li>provision of immediate order and trade information to</li></ul>  | <ul> <li>provision of immediate order and trade information to</li></ul>  |
| compliance staff of the Participant or Access Person;   | compliance staff of the Participant or Access Person;   |
| and   | and   |
| <ul> <li>regular post-trade monitoring for compliance with</li></ul>  | <ul> <li>regular post-trade monitoring for compliance with</li></ul>  |
| Requirements.   | Requirements.   |
| A Participant or Access Person is responsible and accountable for all functions that they outsource to a service provider as set out in Part 11 of Companion Policy 31-103CP <i>Registration Requirements and Exemptions</i> .  | A Participant or Access Person is responsible and accountable for all functions that they outsource to a service provider as set out in Part 11 of Companion Policy 31-103CP Registration Requirements and Exemptions.  |
| Supervisory and compliance monitoring procedures must be designed to detect and prevent account activity that is or may be a violation of Requirements which includes applicable securities legislation, requirements of any self-regulatory organization applicable to the account activity and the rules and policies of any marketplace on which the account activity takes place. These procedures must include "post-order entry" compliance testing enumerated under Part 1 of Policy 7.1 to detect orders that are not in compliance with specific rules, and by addressing steps to monitor trading activity, as provided under Part 5 of Policy 7.1, of any person who has multiple accounts, with the Participant and other accounts in which the person has an interest or over which the person has direction or control. | Supervisory and compliance monitoring procedures must be<br>designed to detect and prevent account activity that is or<br>may be a violation of Requirements which includes<br>applicable securities legislation, requirements of any self-<br>regulatory organization applicable to the account activity<br>and the rules and policies of any marketplace on which the<br>account activity takes place. These procedures must include<br>"post-order entry" compliance testing enumerated under<br>Part 1 of Policy 7.1 to detect orders that are not in<br>compliance with specific rules, and by addressing steps to<br>monitor trading activity, as provided under Part 5 of Policy<br>7.1, of any person who has multiple accounts, with the<br>Participant and other accounts in which the person has an<br>interest or over which the person has direction or control. |
| Policy 7.1 – Trading Supervision Obligations  | Policy 7.1 – Trading Supervision Obligations  |
| Part 8 – Specific Provisions Applicable to Automated  | Part 8 – Specific Provisions Applicable to Automated  |
| Order Systems   | Order Systems   |
| Trading supervision by a Participant or Access Person must  | Trading supervision by a Participant or Access Person must  |
| be in accordance with a documented system of risk   | be in accordance with a documented system of risk   |
| management and supervisory controls, policies and   | management and supervisory controls, policies and   |
| procedures reasonably designed to ensure the  | procedures reasonably designed to ensure the management   |

## Text of Provision Following Adoption of the Proposed Amendments

management of the financial, regulatory and other risks associated with the use of an automated order system by the Participant, the Access Person or any client of the Participant.

Each Participant or Access Person must have a level of knowledge and understanding of any automated order system used by the Participant, the Access Person or any client of the Participant that is sufficient to allow the Participant or Access Person to identify and manage the risks associated with the use of the automated order system.

The Participant or Access Person must ensure that every automated order system used by the Participant, the Access Person or any client of the Participant is tested in accordance with prudent business practices initially before use and at least annually thereafter. A written record must be maintained with sufficient details to demonstrate the testing of the automated order system undertaken by the Participant, Access Person and any third party employed to provide the automated order system or risk management or supervisory controls, policies and procedures.

The scope of appropriate order and trade parameters, policies and procedures should be tailored to the strategy or strategies being pursurd by an automatic order system with due consideration to the potential market impact of defining such parameters too broadly and in any event must be set so as not to exceed the marketplace thresholds applicable to the marketplace on which the order is entered or would otherwise exceed the limits publicly disclosed by the Market Regulator for the exercise of the power of a Market Integrity Official under Rule 10.9 of UMIR.

The Market Regulator expects the risk management and supervisory controls, policies and procedures to comply with the Electronic Trading Rules and be reasonably designed to prevent the entry of any order that would interfere with fair and orderly markets. This includes adoption of compliance procedures for trading by clients, if applicable, containing detailed guidance on how testing of client orders and trades is to be conducted to ensure that prior to engagement and at least annually thereafter, each automated order system is satisfactorily tested assuming various market conditions. In addition to regular testing of the automated order systems, preventing interference with fair and orderly markets requires development of preprogrammed internal parameters to prevent or "flag" with alerts on a real-time basis, the entry of orders and execution of trades by an automated order system that exceed certain volume, order, price or other limits.

Each Participant or Access Person must have the ability to immediately override or disable automatically any automated order system and thereby prevent orders generated by the automated order system from being entered on any marketplace.

Notwithstanding any outsourcing or permitted authorization

#### Text of Current Provisions Marked to Reflect Adoption of the Proposed Amendments

of the financial, regulatory and other risks associated with the use of an automated order system by the Participant, the Access Person or any client of the Participant.

Each Participant or Access Person must have a level of knowledge and understanding of any automated order system used by the Participant, the Access Person or any client of the Participant that is sufficient to allow the Participant or Access Person to identify and manage the risks associated with the use of the automated order system.

The Participant or Access Person must ensure that every automated order system used by the Participant, the Access Person or any client of the Participant is tested in accordance with prudent business practices initially before use and at least annually thereafter. A written record must be maintained with sufficient details to demonstrate the testing of the automated order system undertaken by the Participant, Access Person and any third party employed to provide the automated order system or risk management or supervisory controls, policies and procedures.

The scope of appropriate order and trade parameters, policies and procedures should be tailored to the strategy or strategies being pursued by an automatic order system with due consideration to the potential market impact of defining such parameters too broadly and in any event must be set so as not to exceed the marketplace thresholds applicable to the marketplace on which the order is entered or would otherwise exceed the limits publicly disclosed by the Market Regulator for the exercise of the power of a Market Integrity Official under Rule 10.9 of UMIR.

The Market Regulator expects the risk management and supervisory controls, policies and procedures to comply with the Electronic Trading Rules and be reasonably designed to prevent the entry of any order that would interfere with fair and orderly markets. This includes adoption of compliance procedures for trading by clients, if applicable, containing detailed guidance on how testing of client orders and trades is to be conducted to ensure that prior to engagement and at least annually thereafter, each automated order system is satisfactorily tested assuming various market conditions. In addition to regular testing of the automated order systems, preventing interference with fair and orderly markets requires development of pre-programmed internal parameters to prevent or "flag" with alerts on a real-time basis, the entry of orders and execution of trades by an automated order system that exceed certain volume, order, price or other limits.

Each Participant or Access Person must have the ability to immediately override or disable automatically any automated order system and thereby prevent orders generated by the automated order system from being entered on any marketplace.

Notwithstanding any outsourcing or permitted authorization over risk management and supervision controls, a

| Text of Provision Following Adoption of the Proposed  | Text of Current Provisions Marked to Reflect   |
|---|--|
| Amendments  | Adoption of the Proposed Amendments  |
| over risk management and supervision controls, a<br>Participant or Access Person is responsible for any<br>order entered or any trade executed on a<br>marketplace, including any order or trade resulting<br>from the improper operation or malfunction of the<br>automated order system. This responsibility<br>includes instances in which the malfunction which<br>gave rise to a "runaway" algorithm is attributed to<br>an aspect of the algorithm or automated order<br>system that was not "accessible" to the Participant<br>or Access Person for testing. | Participant or Access Person is responsible for any order<br>entered or any trade executed on a marketplace, including<br>any order or trade resulting from the improper operation or<br>malfunction of the automated order system. This<br>responsibility includes instances in which the malfunction<br>which gave rise to a "runaway" algorithm is attributed to an<br>aspect of the algorithm or automated order system that was<br>not "accessible" to the Participant or Access Person for<br>testing. |