

1.1.2 CSA Staff Notice 23-309 – Frequently Asked Questions about the Order Protection Rule and Intentionally Locked or Crossed Markets – Part 6 of National Instrument 23-101 and Related Companion Policy

CANADIAN SECURITIES ADMINISTRATORS  
STAFF NOTICE 23-309

FREQUENTLY ASKED QUESTIONS ABOUT THE ORDER PROTECTION RULE AND INTENTIONALLY LOCKED OR  
CROSSED MARKETS – PART 6 OF NATIONAL INSTRUMENT 23-101 AND RELATED COMPANION POLICY

The purpose of this notice is to answer some of the frequently asked questions (FAQs) regarding the Order Protection Rule (OPR) and the prohibition against intentionally locking or crossing markets.

The list of FAQs below is not exhaustive, but it includes key issues and questions discussed by the Trade-through Implementation Committee<sup>1</sup> or raised by other stakeholders. Staff of the Canadian Securities Administrators (CSA or we) may update these FAQs from time to time as necessary.

Some terms we use in this notice are defined in National Instrument 21-101 *Marketplace Operation* (NI 21-101) or in National Instrument 23-101 *Trading Rules* (NI 23-101).

Effective on February 1, 2011, the OPR will require marketplaces as well as marketplace participants that send directed-action orders (DAOs), to establish, maintain and ensure compliance with written policies and procedures that are reasonably designed to prevent trade-throughs. To assist marketplaces and marketplace participants in developing these policies and procedures and complying with the OPR, we have compiled some of the issues and questions related to the OPR in the form of FAQs, together with our responses to the questions.

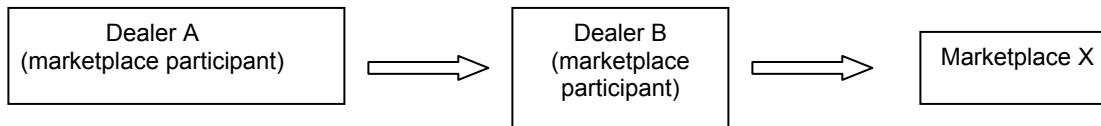
This notice also contains some FAQs regarding the provision that prohibits marketplace participants from intentionally locking or crossing markets. This provision is found in Part 6 of NI 23-101 but is separate from the OPR and is currently in force.

**A. COMPLIANCE WITH OPR REQUIREMENTS**

A-1 Q: When an entity is routing a DAO through a dealer that is a marketplace participant<sup>2</sup>, who will be responsible for the proper use of the DAO marker?

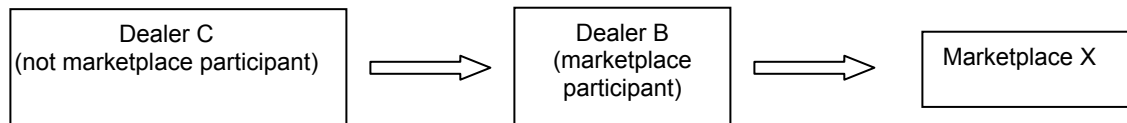
A: A DAO may be routed in a variety of ways. We describe a number of DAO routing scenarios below and identify where the responsibility for proper use of the DAO marker would lie in each instance.

**A: Scenario 1**



Dealer A is a marketplace participant but not a member or subscriber of Marketplace X. Dealer A's orders reach Marketplace X through Dealer B, which is a marketplace participant of Marketplace X. We consider this to be a jitney relationship between Dealer A and Dealer B. Under the OPR, regulatory responsibility for the proper use of a DAO marker rests with both Dealer A and Dealer B, since both are marketplace participants. However, they can agree about which of them will ensure proper use of the DAO marker. It is our view that reasonably designed written policies and procedures for Dealer A and Dealer B, respectively, include both clearly identifying which of them will ensure proper use of the DAO marker and requiring the other's acknowledgement.

**Scenario 2**

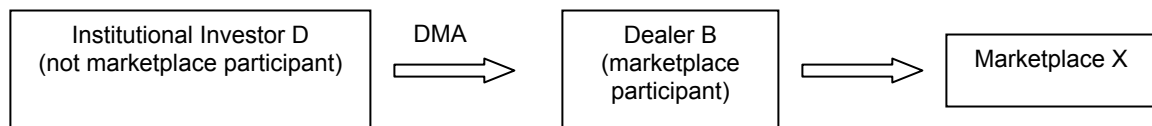


<sup>1</sup> The Trade-through Implementation Committee is an open membership committee comprised of representatives of dealers, marketplaces and vendors that has been meeting periodically since February 2009 to identify and resolve issues regarding the implementation of the OPR.

<sup>2</sup> NI 21-101 defines a marketplace participant to mean a member of an exchange, a user of a quotation and trade reporting system, or a subscriber of an ATS.

Dealer C is not a marketplace participant, therefore we consider this to be a client relationship between Dealer C and Dealer B. Dealer B is the only marketplace participant in this instance and therefore is responsible for proper usage of the DAO marker.

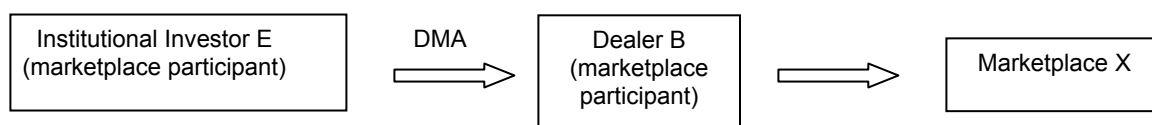
**Scenario 3**



In this scenario, because Institutional Investor D is not a marketplace participant, we would consider this to be a client relationship between Institutional Investor D and Dealer B. Dealer B is the only marketplace participant in this scenario and therefore is responsible for proper usage of the DAO marker.

We note that it is up to a dealer to determine whether it will allow its clients to send DAOs to a marketplace via direct market access. In our view, reasonably designed written policies and procedures for a dealer offering this arrangement would include documenting this decision and the client's obligations.

**Scenario 4**



This scenario also represents a client relationship; however it is between an institutional investor that is a marketplace participant and a dealer that is a marketplace participant of Marketplace X. Like Scenario 1, since both entities are marketplace participants, regulatory responsibility for the proper use of a DAO marker rests with both the institutional investor and the dealer. However, they can agree about which of them will ensure proper use of the DAO marker. It is our view that reasonably designed written policies and procedures for the institutional investor and dealer, respectively, include both clearly identifying which of them will ensure proper use of the DAO marker and requiring the other's acknowledgement.

**Scenario 5**



If an institutional investor is a subscriber to an ATS, then that institutional investor is responsible for ensuring the proper use of the DAO marker on DAOs it sends directly to that ATS.

A-2 Q: Who will enforce the OPR?

A: The OPR will be a CSA-level rule that will be enforced by the CSA. In addition, dealers will be subject to the Universal Market Integrity Rules (UMIR) of the Investment Industry Regulatory Organization of Canada (IIROC) related to the OPR and related policies, procedures and supervision. As all marketplaces have retained IIROC as a regulation services provider, IIROC will monitor compliance with UMIR and the OPR through its compliance reviews and surveillance of trading of its members (including ATs) and access persons.<sup>3</sup> The CSA will also assess compliance of the OPR through their oversight reviews of exchanges.

A-3 Q: Sections 6.1(2) and 6.2(1) of Companion Policy 23-101CP (23-101 CP) will say that marketplaces or marketplace participants that use a DAO are expected to maintain relevant information so that the effectiveness of its policies and procedures can be adequately evaluated by regulatory authorities. What type of documentation needs to be kept in order to satisfy this expectation?

A: Each marketplace and marketplace participant that uses a DAO must regularly review its OPR policies and procedures. These reviews cover the effectiveness of the policies and procedures in place including the testing of any

<sup>3</sup> "Access person" is defined in UMIR as "a person other than a Participant who is: (a) a subscriber; or (b) a user".

system used to facilitate OPR compliance. We recommend retaining documentation related to the reviews, any deficiencies found and any actions taken to address the deficiencies.

We also recommend that a marketplace or marketplace participant that uses a DAO keep or have access to a snapshot of what the market looked like at the time of making the routing decision and sending the DAO.

A-4 Q: Will the OPR require marketplaces to cancel any portion of a DAO that cannot be executed immediately?

A: No, the definition of a DAO will allow a marketplace to either book or cancel any unexecuted remainder of a DAO. Therefore, as part of its policies and procedures, a marketplace needs to clearly describe how it will treat unexecuted portions of DAOs and marketplace participants that send DAOs should verify the treatment of the DAO marker on that marketplace. To ensure the immediate cancellation of any remainder of a DAO that is not initially executed, marketplaces and marketplace participants sending a DAO should use the immediate-or-cancel (IOC) or fill-or-kill (FOK) designation if appropriate.

A-5 Q: Would the following scenario be compliant with the OPR: A marketplace participant that facilitates a manual block trade for a customer at a price that does not trade through a protected order at the time of the match, but when the trade is printed on a marketplace, the price is inferior to a protected order on another marketplace?

A: Yes, subsections 6.2(d) and 6.4(a)(iii) of NI 23-101 will provide some relief due to moving or changing markets.

Subsection 6.3(c) of 23-101CP (which discusses the “changing markets” exception in detail) states that the “changing markets” exception would allow for the execution of an order on a marketplace, within the best bid or offer on that marketplace but outside the best bid or offer displayed across marketplaces in the above circumstance.

A-6 Q: When a new marketplace launches, what OPR requirements must be met by: (i) the new marketplace, (ii) marketplaces in operation at that time and (iii) marketplace participants sending DAOs?

A: A new marketplace will have to establish, and be able to maintain and ensure compliance with, written policies and procedures that are reasonably designed to prevent trade-throughs prior to its launch.

A new marketplace is required under subsection 12.3(1) of NI 21-101 to publicly make available, for at least three months immediately before its operations begin, technology requirements regarding interfacing with or access to the marketplace in their final form. After publishing its technology requirements, subsection 12.3(2) of NI 21-101 requires a new marketplace to make testing facilities for interfacing with and accessing the marketplace publicly available for at least two months immediately before its operations begin.

A marketplace in operation at that time or a marketplace participant that sends DAOs should ensure it has appropriate access to the new marketplace in order to comply with its own OPR obligations.

## **B. SYSTEMS ISSUES REQUIREMENTS**

B-1 Q: Will OPR requirements continue to apply when data is interrupted due to technical problems experienced by the information processor, an information vendor or an independent software vendor?

A: Yes, because the OPR will require that a marketplace or marketplace participant that sends DAOs establish, maintain and ensure compliance with written policies and procedures that are reasonably designed to prevent trade-throughs. Reasonably designed policies and procedures would include steps to address data interruptions.

We note that if a trade-through occurs due to a failure, malfunction or material delay of the systems, equipment or ability to disseminate marketplace data of the destination marketplace, the systems issues exception may be invoked.

B-2 Q: Subsection 6.3(1) of NI 23-101 will require that when a marketplace is aware it is experiencing a failure, malfunction or material delay of its systems, equipment or ability to disseminate marketplace data, it will inform all other marketplaces, its marketplace participants, any information processor, and any regulation services providers of the issue. What elements should be included in the policies and procedures of a marketplace with respect to this notification requirement?

A: In addition to notifying other marketplaces, marketplace participants, the information processor and the regulation services provider as will be required under subsection 6.3(1), marketplace policies and procedures should also address the requirement to promptly notify its regulator or, in Québec, the securities regulatory authority and, if applicable, its regulation services provider, of any material systems failure, malfunction or delay under subsection 12.1(c) of NI 21-101.

In addition, marketplaces have jointly created the “Canadian Marketplace Communication Protocol for Unplanned Service Interruptions”, found at Schedule A of this Notice. This document sets out the elements and parameters around the notification procedures and protocols for the listed marketplaces which we recommend be included or referenced in the policies and procedures of all marketplaces.

B-3 Q: Subsections 6.3(2) and 6.3(3) of NI 23-101 will require that when a marketplace or marketplace participant suspects that a destination marketplace is experiencing a failure, malfunction or material delay of its systems, equipment or ability to disseminate marketplace data that it may bypass this marketplace (systems issues exception) subject to certain notification requirements. What should a marketplace or marketplace participant that sends DAOs include in its policies and procedures about invoking the systems issues exception?

A: We recommend that the policies and procedures of a marketplace participant that sends DAOs and a marketplace describe the following:

**1. Invoking and Ending the Use of the Systems Issues Exception**

A marketplace’s or marketplace participant’s policies and procedures should include the circumstances in which it would invoke the systems issues exception. Such circumstances might include a destination marketplace repeatedly failing to provide an immediate response to orders received or material delays in the response time without notification by the destination marketplace that it may be experiencing systems issues.

The marketplaces, facilitated by the Investment Industry Association of Canada, created a “Marketplace Self-help Procedures” document, found at Appendix C to the Canadian Marketplace Communication Protocol for Unplanned Service Interruptions. This document lists the circumstances that will trigger individual marketplaces to rely on the systems issues exception. We recommend that marketplaces incorporate this element of the document into their OPR policies and procedures. We note that this document may be updated from time to time.

**2. Notification Process**

The OPR will require in subsections 6.3(2) and 6.3(3) of NI 23-101 that a marketplace, and a marketplace participant sending DAOs, communicate their reliance on the systems issues exception. This notification may use various forms of technology, such as e-mail. We recommend incorporating how and when this notification will occur into the policies and procedures of marketplaces and marketplace participants that send DAOs.

We also recommend that marketplaces use a means of contact that is continuously monitored so that systems issues can be addressed promptly.

In addition to identifying the circumstances that will trigger the systems issues exception, the Marketplace Self-help Procedures document also outlines the communications steps each marketplace will take when it uses the systems exception against another marketplace. We recommend that this element of the document also be included in marketplace OPR policies and procedures.

**3. Systems Assessment**

Subsection 6.3(a)(ii) of 23-101CP will explain that a marketplace, or marketplace participant sending DAOs, cannot invoke the systems issues exception against a marketplace unless it reasonably concludes that a particular marketplace is experiencing the problem. The systems issues exception is not available when the systems problem occurs at a vendor that provides services to a dealer.

Subsections 6.1(2) and 6.4(2) of NI 23-101 will require marketplaces and marketplace participants that use DAOs to regularly review and monitor the effectiveness of their OPR policies and procedures. As mentioned in question A-3 above, this includes the testing of any system used to facilitate OPR compliance. We view this as including the testing of:

- routing systems to ensure these systems are functioning properly; and
- the process to be conducted to ensure that the issue does not lie within the marketplace’s, marketplace participant’s or their vendor’s own systems.

#### 4. Documentation of Reliance on Systems Exception

Subsection 6.1(3) of 23-101CP will provide guidance regarding marketplaces maintaining appropriate documentation when handling delayed responses. When relying on the systems issues exception, we recommend that marketplaces, and marketplace participants that use DAOs, maintain evidence of the problem, the notification provided and the systems assessment that was conducted.

#### C. LOCKED OR CROSSED MARKETS<sup>4</sup>

C-1 Q: Is it permissible for a marketplace participant to join the bid or the offer if the market is already locked or crossed?

A: No, it is not permissible to simply join the bid or the offer when a market is locked or crossed.

Subsection 6.4(2)(c) of Companion Policy 23-101CP states that an example of a situation of where a locked or crossed market may occur unintentionally is when “the locking or crossing order was displayed at a time when a protected bid was higher than a protected offer”. This is intended to include an order that is entered to uncross the market but not an order that simply joins the bid or the offer.

C-2 Q: What are some instances where a locked or crossed market may occur unintentionally?

A: Subsection 6.4(2) of Companion Policy 23-101CP outlines some situations where a locked or crossed market may occur unintentionally. There may be other situations where a locked or crossed market may also occur unintentionally including when securities legislation requires that the order be entered on or executed on a particular marketplace. For example, this might occur when securities being sold are subject to resale on a “designated offshore securities market” under Rule 904 of Regulation S of the *U.S. Securities Act* of 1933. Some other situations where a locked or crossed market may occur unintentionally include: (1) the execution of opening orders or market-on-close orders on a particular marketplace when trading is on-going or continues on at least one other marketplace and (2) the restarting of trading of a security on a marketplace following a halt for either regulatory or business purposes given that marketplaces may use different mechanisms to resume trading.

If you have any questions about these FAQs or the OPR generally, please contact the following CSA staff:

Tracey Stern  
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(416) 593-8167  
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Serge Boisvert  
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Lorenz Berner  
Alberta Securities Commission  
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**June 25, 2010**

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<sup>4</sup> The prohibition on intentionally locking or crossing markets is set out in section 6.5 of NI 23-101.

Schedule A

*Canadian Marketplace Communication Protocol for Unplanned Service Interruptions*

The objective of this Protocol document is to provide a clear framework detailing the minimum standards/benchmarks for communications when Canadian marketplaces experience an unplanned, material service interruption. The Protocol is a non-binding, best-practice guideline for industry-wide reference and adoption, intended to provide industry stakeholders with relevant information in a predictable and consistent manner when such interruptions occur. All Canadian markets as at the date of this document have agreed to use their best efforts to comply with the Protocol.

**1. Scope**

The Protocol covers any unplanned material interruption to, or degradation of, a marketplace's service where the problem would cause the loss of integrity to the data stream; the loss of messages; stoppage or delay of updates; corruption of message formats or errors in content during normal operations; connectivity problems; stoppage or delay of order entry, order routing or other trading services (Material Service Interruption).

The scope of the Protocol is limited to notification schedules and communication processes, and includes the following elements:

- initial notice of the problem including what is affected and an estimate for restoring service;
- periodic follow-up until the problem is resolved;
- notice when service has been restored;
- preliminary and final description of the problem and how/when it will be / was fixed; and
- the requirement for contact names, numbers, points for escalation, and an open conference line that direct recipients can dial into wherever possible during actual events.

**2. Determination of Impact**

It is in the discretion of each marketplace to determine if a problem is material in nature. In doing so, the following factors should be considered:

- number of participants unable to use the applicable marketplace service;
- degree of control the marketplace has over the service;
- impact on market liquidity and/or quality; and
- availability of other alternatives / workarounds.

Notification Guidelines	Preliminary Determination	Interim Updates	Service Restoration	Problem Resolution
<p>Frequency</p>	<p>Upon becoming aware of a Material Service Interruption, the marketplace should notify all marketplace participants, service providers and/or stakeholders as appropriate (Recipients).</p>	<p>For longer outages, status updates should be provided whenever material information becomes known. Where no new information is available, marketplaces should communicate that fact to Recipients on at least an hourly basis.</p>	<p>The marketplace should provide notice that the service has been restored as soon as possible.</p>	<p>Within 24 hours after the problem has been resolved, the marketplace should provide a written (preliminary) assessment of the incident.</p> <p>If any further information comes to light, marketplaces should provide a final, written description of the incident within 1 week after this information becomes known.</p>
<p>Content</p>	<p>The initial notice should include, to the extent that the information is available:</p> <ul style="list-style-type: none"> <li>• a description of the problem;</li> <li>• what content and/or which systems are affected (particularly if the marketplace provides multiple feeds or services);</li> <li>• notice (or a reasonable projection) of when service will be restored or, if this is not possible, the next projected status update time; and</li> <li>• customer statements to Recipients (who can in turn pass on to their customers).</li> </ul> <p>If the outage is the result of a telecommunications problem, the marketplace should, when such information is known, provide details of the entity responsible for fixing the problem (e.g. the communications vendor, marketplace IT department or Recipient) and describe whether a restart of downstream devices or restart of an IP session is required.</p> <p>Timeliness of notification should supersede completeness of information when marketplaces are faced with such a trade-off.</p>	<p>Interim updates should indicate progress toward resolution and an updated estimate of the resolution timeframe.</p> <p>The updates should also include any new information about the causes and impacts of the interruption.</p>	<p>The notice should:</p> <ul style="list-style-type: none"> <li>• provide times of when the incident began and when it was resolved</li> <li>• indicate whether restoration is partial or full</li> <li>• detail any elements of the service that may remain degraded</li> </ul>	<p>Marketplaces should provide a final, written description describing the problem, the permanent fix and any other steps, such as procedural, communications, hardware or software changes that have been or will be implemented to prevent a recurrence of the interruption.</p> <p>If the matter is still under investigation, this should be explained and further updates should be provided to fill in missing details.</p> <p>If the fix is a temporary work-around with a permanent fix to come, this should be explained and target dates should be provided for the final resolution.</p>

**3. Communication Channels**

Notice should be disseminated via the appropriate electronic mechanisms, including telephone, e-mail, web site, pager, etc. Notice via logically formatted messages in the marketplace's data feed is the recommended method if the service itself is still available.

Follow-up updates may be provided in the same manner as the initial communication, or may be disseminated on a website accessible to Recipients, if the initial communication or any follow-up updates provide for such a procedure.

Where appropriate, marketplaces should also establish an open conference line that Recipients can dial into during a Material Service Interruption.

**4. Marketplace Resources and Contact Lists**

Appendix A provides a list of contacts.

These contacts are responsible for initiating notices to recipients, and responding to any necessary inquiries from direct recipients; they should not also be responsible after recovery of the service, to ensure that there is no conflict with the requirement for customer notification and support. Attached is a list of the names and contact information. It is the obligation of each marketplace to inform the other marketplaces of any changes to this contact information.

**5. Marketplace Restart Procedures Following a Material Service Interruption**

If a marketplace has suffered a Material Service Interruption, it will follow the procedures set out in Appendix B upon the restart of services.

**6. Marketplace Self-Help Procedures**

If a marketplace declares self-help against another marketplace, it will follow the procedures set out in Appendix C.



Appendix A – Canadian Marketplace Contacts

Marketplace	Primary			Secondary			Open Conference Line
	Contact	Phone	Email	Contact	Phone	Email	
Alpha	General Client Services/ Operation Representative	647-259-0450	clientservices@alphatrading systems.ca	Lloyd Clarke, Manager, Trading Operations and Services Randeep Pavalow, Head of Business Operations & Regulatory Matters	647-259-0460 647-259-0420	lloyd.clarke@alphatrading systems.ca Randeep.pavalow@alphatrading systems.ca	
Chi-X	Chi-X Canada Operations	1-888-310-1560	operations@chi-xcanada.com	Peter Trudeau, Director Subscriber and Vendor Services Dan Kessous, Chief Operating Officer	416-304-6373 416-304-6372	peter.trudeau@chi-xcanada.com dan.kessous@chi-xcanada.com	
Liquidnet		646-674-2100	memberservices@liquidnet.com				
Omega	Support	416-646-2428	support@omegaaats.com	Raymond Tung  Greg King	W: 416-646-2429 M: 416-660-6073  W: 416-646-2764 M: 416-300-1585		
Pure Trading	CNSX Market Operations	416-306-0772	marketops@cnsx.ca	David Timpany	(b) 416-572-2000 ext 2290 (c) 416-917-1008	david.timpany@cnsx.ca	
TriAct – MATCH Now	Rob Durham – Trading Systems Administrator	416-861-1010 x0	support@triactcanada.com	Tom Doukas – Manager, Operations Heather Killian – Chief Operating Officer	416-861-1010 x0 416-861-1010 x0262	support@triactcanada.com hkillian@triactcanada.com	Distributed as required

Marketplace	Primary Contact		Secondary Contact			Open Conference Line	
	Contact	Phone	Email	Contact	Phone		Email
TSX	Trading Services	416-947-4357 or TSX Vendor Services.416-947-4705	trading_services@tsx.com	Mark Jarrett – Director, Equity Operations	416-947-4693	mark.jarrett@tsx.com	Distributed as required
				John Washburn – Vice President, Business Operations	416-947-4497	john.washburn@tsx.com	

**Appendix B**  
**Canadian Marketplace Restart Procedures**

Procedure	TSX/TSX-V	Alpha	Omega	Pure Trading	Chi-X	TriAct	Liquidnet
System outage however connection up	No net new order flow/order modifications	No new orders/amends permitted until pre-open.	All orders are cancelled	All gateway connections are terminated	Status Orders	Cancel orders	Trading Halted. Negotiation cancelled
Notice to Members of Subscribers of Time of Restart	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Type of Communication	Clients contacted through usual communication channels	Notice to Subscribers sent out via email.	E-mail to dealers and vendors	E-mail to CNSX Market Operations list and an admin msg over feed	E-mail to distribution list	E-mail to distribution list	E-mail to Members
Pre-open rotation	Yes	Yes, during pre-open cancels and amends are allowed.	n/a	Yes	Yes	Yes	Not applicable
Typical time for Rotation	minimum of 30 minutes	Minimum of 30 minutes pre-open unless special circumstances. In each case notice of time period will be provided.	n/a	Depends		10 minutes+ 5 minutes /hour of outage	--
Post mortem e-mail		Yes, will be sent within 24 hours of service interruption	Sent to affected clients requesting a report		Within 24 hours		Incident report created to document the event with root cause
Trading to not resume after a certain time		No				3:45 pm	Incident-by-Incident

**Appendix C**  
**Marketplace Self-help Procedures**

Market Participants, including marketplaces, can declare self-help against a marketplace when a marketplace is having operational issues (failure, malfunction or material delay of its systems or equipment) which would make the routing of orders to that marketplace inappropriate. Notwithstanding any declaration of self-help by other marketplace participants, if a marketplace is aware of its own operational problems it should communicate in accordance with the principles set out in the Protocol document. Also, a marketplace participant cannot declare self-help against a marketplace when it is experiencing its own issues or is having problems with its vendor.

MARKETPLACE	REASONS FOR DECLARING SELF-HELP	COMMUNICATIONS AND ACTIONS REGARDING MARKETPLACE EXPERIENCING PROBLEMS
Alpha ATS	<ul style="list-style-type: none"> <li>• Slow, Corrupted, or no Data from marketplace</li> <li>• Connectivity to the marketplace is lost</li> <li>• Orders are not being received or processed</li> </ul>	<ul style="list-style-type: none"> <li>• Step 1 – Alpha contacts marketplace to report and inquire about issue.</li> <li>• Step 2 – Upon confirmation of the issue, self-help is declared with an email confirming the time and cause of the self-help declaration. A copy is sent to IROC and OSC.</li> <li>• Step 3 – Notice to all marketplace participants of declaration of self help is issued. Receipt of data and routing to the marketplace is suspended.</li> <li>• Step 4 – Upon receipt from the marketplace of notification that the issue has been resolved, notice will be sent to marketplace, marketplace participants, and regulators that receipt of data and order routing will be resumed.</li> </ul>
TriAct Canada Marketplace – MATCH Now	<ul style="list-style-type: none"> <li>• Slow, Corrupted, or no Data from marketplace</li> <li>• Connectivity to the marketplace is lost</li> </ul>	<ul style="list-style-type: none"> <li>• Step 1 – TCM contacts marketplace to report and inquire about issue.</li> <li>• Step 2 – Upon confirmation of the issue, self-help is declared with an email confirming the time and cause of the self-help declaration. A copy is sent to IROC.</li> <li>• Step 3 – Notice to all marketplace participants of declaration of self help is issued. Market data for the affected marketplace is removed from the NBBO calculation (used to determine MATCH Now pricing)</li> <li>• Step 4 – Upon receipt from the marketplace of notification that the issue has been resolved, TCM will confirm with market data vendor that feeds are stable and appear reliable.</li> <li>• Step 5 - Notice will be sent to marketplace, marketplace participants, and regulators revoking self-help and market data will be added back to the NBBO calculation</li> </ul>
Chi-X	<ul style="list-style-type: none"> <li>• Data issues or delays</li> <li>• Connectivity to the marketplace is lost</li> <li>• Orders are not being received or processed</li> </ul>	<ul style="list-style-type: none"> <li>• Step 1 – Chi-X contacts marketplace to report and inquire about issue.</li> <li>• Step 2 – Upon confirmation of the issue, self-help is declared with an email confirming the time and cause of the self-help declaration. A copy is sent to IROC and OSC.</li> <li>• Step 3 – Self-help notice is sent to the trading community; Chi-X IOB and smart router remove target marketplace from consideration.</li> <li>• Step 4 – Upon written receipt from the marketplace that all outstanding issues have been resolved and stability can be confirmed, target marketplace will be reinstated for IOB and smart routing consideration.</li> </ul>
Liquidnet ATS	<ul style="list-style-type: none"> <li>• Self Help not applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Liquidnet ATS does not route</li> </ul>

MARKETPLACE	REASONS FOR DECLARING SELF-HELP	COMMUNICATIONS AND ACTIONS REGARDING MARKETPLACE EXPERIENCING PROBLEMS
Omega ATS	<ul style="list-style-type: none"> <li>Self Help not applicable</li> </ul>	Omega ATS does not route
TMX	<ul style="list-style-type: none"> <li>Material malfunction or interruption of order entry connectivity</li> <li>Material malfunction or interruption of data connectivity/feeds</li> <li>General system failure</li> <li>Pattern of unreliable order execution</li> </ul>	<ul style="list-style-type: none"> <li>Step 1 – TSX Equity Operations will notify affected ATS by telephone, followed by an email, to inform the ATS that it intends or has begun to stop routing orders to ATS. The notice should include the time that problem was observed, the cause/basis of the concern, action taken by TMX and anticipated resolution criteria.</li> <li>Step 2 - TSX Equity Operations will send a "Self-Help" notification to a TSX SOR e-mail distribution list which will include, but is not limited to, all TMX SOR subscribers and IIROC. Should self-help status continue into subsequent trading day(s), Self Help Notification e-mail will be re-sent by 9:30AM of each day until resolved.</li> <li>Step 3 - If the issue is resolved by TMX, TSX Equity Operations shall notify affected ATS's that the issue has been resolved and request that the cessation of routing services be revoked.</li> <li>Step 4 –TMX Equity Operations will also send a Self-Help removal notification to a TSX SOR e-mail distribution list which will include, but is not limited to, all TMX SOR subscribers and IIROC.</li> </ul>