ANNEX G

COMMENT SUMMARY AND CSA RESPONSES

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Marketplace systems and business continuity planning: **(i) Business Continuity Testing**	Commenters supported the general direction of the CSA's proposal on business continuity testing. One commenter requested more clarity on what qualifies as a disaster and how the CSA interprets when a service, such as trading, is deemed to not be operative. Another commenter strongly encouraged the CSA to mandate a marketplace's production environment for participation in this industry wide test since using a test environment significantly undermines the effectiveness of a BCP test. Three commenters questioned whether the obligation to participate in industry-wide testing should apply to all protected marketplaces, as defined in the "CSA Notice and Request for Comment – Proposed Amendments to National Instrument 23-101 Trading Rules". One commenter suggests that mandatory participation as applied to marketplace participants should be limited to marketplace participants that are investment dealers. One commenter suggested that resumption times for marketplaces should be shortened to one hour from the currently stated two hours. Two commenters suggest the two hour mandated recovery time for marketplaces be moved to a best efforts standard. Two commenters suggested a lower threshold for the system resumption requirements in section 12.4. One commenter pointed out that the proposed changes to section 12.4 of the Instrument would effectively require a marketplace to deploy a dedicated disaster recovery site,	In regards to defining "disaster", the CSA does not believe that the Instrument should prescribe what constitutes a disaster and that marketplaces should be guided by their own BCP plans in determining what qualifies as a disaster for purposes of the requirements at section 12.4. We have amended the Companion Policy (CP) to reflect this guidance. Our view is that all marketplaces, whether protected or not, have the potential to contribute risk to the capital markets and should therefore participate in industry-wide testing. We also expect that marketplaces will make their production environments available for industry-wide testing and have amended the CP to reflect this expectation. We have narrowed the obligation to participate in industry-wide BCP tests under 12.4.1 from marketplace participants to participant dealers. The definition of "participant dealer' has been incorporated from National Instrument 23-103 *Electronic Trading and Direct Electronic Access to Marketplaces* (NI 23-103) for purposes of limiting participation in the industry-

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	which would be a material undertaking for an exchange, and for its vendors and dealer customers.	wide BCP test to dealers only. With respect to the system resumption requirements in section 12.4, we acknowledge that owing to the many, and at times unforeseen, variables that may affect a marketplace's key systems, there may be instances where it is not possible for a marketplace to ensure that such systems resume operations within the specified times following the declaration of a disaster. We have therefore revised section 12.4 to require a marketplace that meets the threshold to establish, implement and maintain *policies and procedures* reasonably designed to ensure system recovery within the prescribed timeframes. As regards the threshold for the system resumption requirements in s.12.4, it is our view that 10% is the appropriate threshold at this time. Our view is that two hours strikes the appropriate balance between having key systems resume operations in a timely manner following a declaration of a disaster with allowing marketplaces sufficient time to diagnose and rectify systems issues in the event of disruption. We have therefore left the resumption periods in section 12.4 unchanged. Finally, it is not the intention of the amendments to require

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		marketplaces to maintain a dedicated disaster recovery site.
Marketplace systems and business continuity planning: **(ii) Uniform Test Symbols in Production Environments**	One commenter expressed concerns that a marketplace's production environment may be negatively impacted by marketplace participants using test symbols to try out trading strategies. One supporter of this provision notes that all symbols in a production environment demand system resources and that a marketplace should be able to exercise its power under Part 4 of National Instrument 23-103 to suspend access to a test symbol in a production environment if it is negatively impacting the production environment. Two commenters suggest the formation of an industry working committee to assist in identifying issues related to implementation of this provision and to ensure that any changes to marketplace operations are implemented effectively across all marketplaces. A commenter suggested a requirement for marketplaces to disclose their policies relating to this type of testing. Another commenter suggested mandating the duration of testing. One commenter would like clarity as to whether the rule amendments would preclude a marketplace to use, and make available to participants, non-uniform test symbols for the purposes of performing testing in the production environment where appropriate.	We have amended the CP to indicate that the use of uniform test symbols is intended to facilitate the testing of functionality in a marketplace's production environment and is not intended to enable stress testing by marketplace participants. To the extent that the use of test symbols may negatively impact the performance of a marketplace's production environment, our view is the marketplace may suspend access to a test symbol where its use reasonably represents undue risk. We have also reflected in the CP the CSA's view that misuse of test symbols by marketplace participants may amount to a breach of the fair and orderly markets provisions of NI 23-103. As indicated in the Notice accompanying the proposed amendments, our expectation is that the details of how best to implement the test symbols requirement will be discussed with an industry working group. Clearing firms and information processors could be included in the consultation so that coordination, if necessary, is achieved. However, it is beyond the scope of the proposed

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		amendments to mandate the use of test symbols by clearing agencies and information processors at this time. We have amended section 10.1 of the Instrument to provide for the disclosure, on a marketplace's website, of any policies and procedures relating to a marketplace's use of uniform test symbols for purposes of testing in its production environment. We are also of the view that the proposed amendments regarding test symbols would not preclude a marketplace from using its non-uniform test symbols to carry out testing in the production environment where appropriate.
Marketplace systems and business continuity planning: **(iii) Security Breaches**	Two commenters support a requirement that a marketplace notify a regulator or securities regulatory authority of any material security breach in a timely manner. One commenter believes the proposed amendments in relation to notification of material security breaches are extremely broad and that reporting of such information will expose confidential and sensitive system information to unnecessary leakage. The commenter submits that assessing the materiality of a security breach based on the potential impact of such a breach would be a more practical standard.	The CSA believes that notification of security breaches is important and useful and that such notification is an important part of our ongoing oversight of marketplaces. The provisions for the reporting of material security breaches are comprehensive. As expressed in the CP, a material security breach would be any unauthorized entry into any of the listed systems and that, as a result, virtually any *successful* security breach would be considered material. Since this provision is not intended to cover *unsuccessful*

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		attempts at unauthorized entry, the CSA believes that the number of reportable security breaches should be reasonable. While we acknowledge the concerns raised with respect to risks associated with the reporting of confidential and sensitive information around security breaches, we note that Canadian securities regulatory authorities maintain secure systems and have implemented policies and procedures designed to safeguard confidential and sensitive information. We also note that in Ontario, the Ontario Securities Commission has ordered that the forms required to be filed pursuant to the Instrument be held in confidence pursuant to section 140(2) of the Securities Act (Ontario).
Marketplace systems and business continuity planning: **(iv) Expansion of scope of ISRs**	One commenter requested further clarity on the definition of "auxiliary systems" and points out that agreements with third party providers would have to be reviewed and amended to provide access for the ISR audit team. The commenter submits that third party providers may not be amenable to exposing components of their own security measures to ISR auditors.	While we acknowledge the comment, the CSA's view is that the description of "auxiliary systems' and the corresponding requirements in section 12.1.1 of the Instrument are clear. We also note guidance from the Securities and Exchange Commission in Regulation SCI on systems operated on behalf of an SCI entity by a third party: "SEC believes that permitting such systems to be excluded from the requirements of

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		Regulation SCI would significantly reduce the effectiveness of the regulation in promoting the national market system by ensuring the capacity, integrity, resiliency, availability, and security of those systems important to the functioning of the U.S. securities markets. Further, if the definition did not include systems operated on behalf of an SCI entity, the Commission is concerned that some SCI entities might be inclined to outsource certain of their systems solely to avoid the requirements of Regulation SCI, which would further undermine the goals of Regulation SCI. If an SCI entity is uncertain of its ability to manage a third-party relationship (whether through due diligence, contract terms, monitoring, or other methods) to satisfy the requirements of Regulation SCI, then it would need to reassess its decision to outsource the applicable system to such third party."
Marketplace systems and business continuity planning: **(v) Launch of new marketplaces and material changes to marketplace technology**	With respect to the requirement to provide marketplace participants and service vendors reasonable opportunity to adapt to the launching of new marketplaces and material changes made to a marketplace's technology requirements, one commenter suggests this requirement should apply only where the proposed change would require participants of the applicable marketplace or market participants generally to implement material changes to their own technology. One commenter noted that, unlike OSC Staff	We acknowledge the comment regarding the possible impact of the amendments on the timing for implementation by marketplaces of material system changes. Although, in the CSA's view, it is essential that marketplace participants and access vendors have sufficient time to undertake the necessary work to accommodate the launch of

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requirements	Notice 21-706, the amendments do not permit any flexibility regarding the time and effort required to introduce a "material system change" other than what constitutes a material change itself. As a result, the commenter suggests that the amendments may limit and restrict marketplaces from implementing beneficial technology changes in a timely manner and may also have a negative impact on marketplace advancement and competitiveness. The commenter also suggests that guidance be provided as to what would constitute a "material system change" and whether there is any intended relationship between the terms "significant change" and "significant impact" under Section 6.1(4) of the CP21-101. In connection with **certification** by a marketplace's chief information officer that all IT systems have been tested according to prudent business practices and are operating as designed prior to a marketplace beginning operations or implementing material changes to its technology requirements, one commenter believes that this provision will impose unnecessary costs and unduly delay beneficial market changes from being implemented. The commenter submits that rather than a formal certification, policies and procedures that support appropriate testing and internal sign offs prior to implementation of material systems' changes could meet the intent of this provision.	new marketplaces or material systems changes made by existing marketplaces following the regulatory review process, we have decided to not adopt the proposed amendment to subsection 12.3(3) at this time. We acknowledge the comment about the possibility of delay associated with the certification by a marketplace's CIO but, in our view, the importance of ensuring that proposed systems changes have been properly tested warrants the requirement.
Marketplace systems and business continuity planning: **(vi) Other**	One commenter expressed concerns with the proposed amendments to Exhibit G of Forms 21-101F1 and 21-101F2 as, in the view of the commenter, the new requirements are broad and onerous and would introduce systemic risk, as well as create an unacceptable and unnecessary security risk for confidential	We acknowledge the comment regarding the changes to Exhibit G of Forms 21-101F1 and 21-101F2. However, the CSA's view is that the additional information requested in Exhibit G is

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System Related Amendments	marketplace information.	essential for the Canadian securities regulatory authorities to have an informed understanding of the marketplace's systems and its approach to contingency planning that is in keeping with the interconnectedness of marketplaces and the impact that systems disruptions can have on the market overall. We note that some additional reporting requirements have been included in Exhibit G to Forms 21-101F1 and 21-101F2, including some additional description regarding a marketplace's business continuity and disaster recovery plans, which will provide for a more complete representation of the marketplace's BCP/DRP and is consistent with international regulatory approaches to the oversight of business continuity planning by marketplaces. We have also revised the reporting requirements for a marketplace's network diagram and organization chart for a marketplace's IT group in order the clarify the requirements and avoid duplicative reporting. Lastly, as discussed above in 2(iii), we note that the Canadian securities regulatory authorities maintain secure systems and have implemented policies and procedures designed to safeguard

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		confidential and sensitive information.
Use of marketplace participants' trading information for research.	A number of commenters had specific concerns regarding the proposed amendments for the disclosure of the order and trade information of marketplace participants for purposes of capital markets research. Commenters' concerns related to the risks of misuse of the information once disclosed by the marketplace, risks around the safe storage of information by recipients, and risks that marketplace participants may nevertheless be identified through disclosure of their order and trade information. Specific concerns identified by commenters included the risk that recipients might be able to reverse engineer the trading strategies of marketplace participants based on the information received and therefore obtain insight into proprietary trading strategies, even if the information were masked. Commenters also expressed concern that marketplaces are not incented or equipped to effectively monitor recipients' use of the order and trade information once disclosed, leaving the risks associated with disclosure unmitigated. Lastly, commenters expressed concern that the proposed requirements in the Instrument may not apply to ultimate recipients of the information in the event a recipient further discloses the information to a research assistant or a third party for purposes of verification. A number of commenters suggested the creation of a process by which marketplace participants would be notified in the event	We acknowledge the comments received and thank commenters for their thoughtful reaction to the proposed amendments. The CSA's view is that it is in the public interest for capital markets research to be conducted. Since marketplace participants' order and trade information may be needed to conduct this research, subsection 5.10(1.1) of the Instrument allows a marketplace to release a marketplace participant's order or trade information without obtaining its written consent, provided this information is used for capital markets research and only if certain terms and conditions are met. We note that 5.10(1.1) was modified so as to clarify that a marketplace may release a marketplace participant's order or trade information if it reasonably believes that information will be used solely for the purpose of capital markets research and that that information is required for the purpose of the capital markets research. Moreover, the CSA has made clear that the research is not intended for the purpose identifying a particular marketplace participant or identifying transactions,

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	that a marketplace proposed to disclose their order and trade information, including being given an opportunity to comment on the proposed disclosure.	trading strategies or market positions of a particular marketplace participant. In addition, we have refined the provisions for disclosure of order or trade information used in connection with research submitted to a publication.
Co-location and other access arrangements with a service provider.	Three commenters questioned whether a marketplace can ensure that a third-party operator would provide a form of access that complies with the marketplace's criteria for fair access. Another commenter suggests that proper due diligence should be the expectation placed on a marketplace for ensuring that a third party provider follows its fair access policies. One commenter submitted that the proposed requirement in Section 5.13 and 10.1(i) of NI21-101 is very broad and the drafting should be clarified. The commenter expressed concerns that these sections could be interpreted to apply to access services provided in the normal course by a third party access vendor, and absent any commercial agreement or arrangement between the marketplace and "third party service provider" under which the access services are being performed or facilitated for or on behalf of the marketplace.	In our view, hosting services can be provided by the marketplace or by a third party provider. In the case of the latter, it is the CSA's view that it is appropriate for the marketplace to require, as part of its agreement with the third party provider, that the third party provider provide access in a way that complies with the fair access requirements of the Instrument. We confirm that the proposed amendment is intended to apply to key marketplace access services, including co-location services, rather than access services provided in the normal course absent any agreement with the marketplace, such as services provided by a third party access vendor.
Information in Forms: 21-101F1, 21-101F2, and 21-101F3. **(a) Guidance Regarding**	One commenter expressed concern that the extended approval process puts Canadian marketplaces at a competitive disadvantage relative to competing marketplaces in the US and other jurisdictions. The commenter suggests that public comment on a proposed marketplace rule change would be appropriate when the rule change would	In the CSA's view, regardless of whether a change should be published for comment or not, all significant changes require the benefit of at least 45 days prior notice to allow for a full consideration of the change by staff. The CSA notes that the

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Significant Changes to Form 21-101F1 and Form 21-101F2	have a significant impact on market participants that are not participants of the specific marketplace. However, if a change would only have a significant impact on those participants who are subscribers of the specific marketplace, the commenter believes that a 20-day notice period to the regulator would be appropriate, but it would not seem appropriate to require publication of the proposed change for public comment. One commenter believes that permitting marketplaces discretion when determining whether or not certain changes are significant will help operations be more fluid and remedy some unnecessary delays. Two commenters suggest that this section be revised to include a materiality threshold to ensure resources are allocated effectively and efficiently, and to ensure the process treats all marketplaces fairly when managing marketplace changes and their associated filings. One commenter requests confirmation that the Rule Protocol will be amended in tandem with the Proposed Amendments or that another solution will be made so that fee changes are not considered a "significant change subject to public comment".	45 days prior notice for significant changes is also in accordance with rules in other jurisdictions, including the U.S. In Staff's view, the new guidance around significant impact in the CP is expected to assist marketplaces in having the flexibility to determine what changes are considered significant relative to the impact the change is expected to have on the marketplace. In our view, by assessing the significance of the change relative to its expected impact on the marketplace, there is an appropriate amount of discretion to allow for the appropriate treatment of proposed changes. Lastly, we acknowledge the need to amend, in Ontario, the protocols for the review and approval of rule changes and significant changes for marketplaces to ensure continuity with the guidance in the CP.
Information in Forms: 21-101F1, 21-101F2, and 21-101F3. **(c) Annual Certification of Form 21-101F1 and Form 21-**	Two commenters do not see the need for a complete and new consolidated form being submitted each year at the same time. One commenter submits that the proposed annual filing and certification under Section 3.2(4) of NI21-101 is duplicative and places an undue regulatory burden on marketplaces without added benefit.	The requirement to file complete and accurate information with respect to Form 21-101F1 and Form 21-101F2 ensures that each marketplace reviews its F1/F2 to ensure descriptions match any significant changes made during the year and that the changes made are still in effect and that the form is complete

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101F2 Information		and up to date.
Information in Forms: 21-101F1, 21-101F2, and 21-101F3. **(e) Changes to Form 21-101F3**	The commenter submits that the proposal to receive information in Form 21-101F3 regarding significant systems and technology changes during the quarter is duplicative of filings made under the Rule Protocol, the 21-101F1 and 21-101F2 filing process and the Automation Review Program for Market Infrastructure Entities in the Canadian Capital Markets.	We acknowledge the concern that the proposal to receive information is duplicative. With respect to the reporting of systems changes in the F3, we anticipate that this reporting would replace similar reporting required by the ARP and SRP and consolidate these requirements in the Instrument.
Provision of data to information processors.	One commenter suggested that the proposed amendments to subsections 7.1(3) and 7.2(2) do not meet the CSA's stated objectives to ensure that information made available by marketplaces to the IP is timely, as the 'made available' test of timeliness does not go far enough. The commenter put forward that the only fair and monitorable system would require centralized dissemination of trade data and market data (i.e. the IP releases the data to participants rather than acting like a participant.) Another commenter suggested that the proposal should focus on when marketplace participants receive the data. One commenter suggests that the demarcation point for delivery of the data to the TMX IP is considerably upstream from the point that the same data is made available to other consumers and questions whether the intent this provision is to require the contributing marketplaces to delay provision of the data to other consumers.	We note that the centralization of data distribution through the IP represents a fundamental change to the existing model of data distribution that is beyond the scope of the proposed amendments. The purpose of the proposed changes to section 7.1(3) and 7.2(2) is to codify current expectations around the timely distribution of market data within the current model for data distribution by marketplaces. While acknowledging that there may be differences in the time in which marketplace participants receive order and trade information from the IP relative to those that receive it directly from a marketplace, we have revised the CP to clarify the CSA's expectation that in complying with the requirements of subsections 7.1(3) and 7.2(2) of the

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		Instrument, marketplaces will release order and trade information simultaneously to both the IP and to marketplace participants that take in market data directly from the marketplace. We also note that marketplaces have affirmed with the OSC that they provide real time data to the IP at the same time and at the same rate of speed as provided to marketplace participants that elect to maintain direct connectivity to marketplaces.
Obligations of a recognized exchange to a regulation services provider.	The commenter contends that IIROC has not been granted the power to monitor exchange conduct. The commenter does not disagree that the interrelated nature of the operations of an exchange with the operations of its regulation services provider (RSP) may require coordination; however, this coordination does not require that the RSP monitor the conduct of the exchange. Furthermore, this provision implies an authority to the RSP that is not appropriate, desirable or necessary. With respect to the new provisions proposed for Section 7.1 of CP23-101, the commenter does not agree that "[t]he regulation services provider is also required to monitor the compliance of the recognized exchange or recognized quotation and trade reporting system with the adopted rules [i.e. – UMIR]." The commenter submits that the RSP's authority under Section 7.2.1(b) should be restricted to "orders or directions of its regulation services provider that are in connection with the conduct and trading by the recognized exchange's members on the	We note the comments and concerns regarding obligations of a recognized exchange to a RSP and agree that the RSP does not regulate the exchange. However, it is our view that it is appropriate and necessary for the RSP to monitor the compliance and conduct of a recognized exchange with respect to those requirements applicable to the exchange and to report to the applicable securities regulatory authority only. The applicable securities regulatory authority has the authority to enforce these rules against a recognized exchange. The CSA mandates that a recognized exchange must transmit information *reasonably* required by an RSP. '*Reasonably* required by an RSP' also applies to the *form* of the data and the *manner* of the data

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	recognized exchange." With respect to Section 7.2.1(a) of NI23-10, IIROC can mandate the form and manner for delivery of data stipulated by Part 11 of NI21-101, but other data in the possession of the exchanges required by IIROC for its regulation services is provided in the form possessed by the exchanges.	transmission. As submitted by the commenter, coordination between recognized exchanges and RSPs is expected. We believe that such coordination should naturally apply to arrangements for the form and manner of data transmission and it is up to the RSP to determine the best way for the data to be provided.
Clearing and settlement.	One commenter believes the proposed amendments do not adequately address the complexities of clearing agencies, including those relating to their multifaceted functions, foreign regulatory and commercial differences, and CCP interoperability.	We acknowledge the comment regarding the issues raised by the prospect of multiple clearing agencies. The CSA's objective in proposing the amendments to Part 13 of the Instrument was to remove any impediments in the Instrument to prospective competition in the provision of clearing and settlement services. We have elected not to revise the definition of clearing agencies in 13.2(1). In the CSA's view, with the mandatory recognition of clearing agencies, to the extent that a marketplace participant designated a clearing agency for purposes of trade reporting pursuant to subsection 13.2(1) of the Instrument, that clearing agency would be carrying on business as a clearing agency and would need to be appropriately recognized or exempt from recognition. We also acknowledge the

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		commenter's concerns regarding the challenges associated with the interoperability of central counterparties in a multiple clearing agency environment. Our expectation is that, in the event of competition in the provision of clearing and settlement services such that different clearing agencies could be designated for purposes of subsection 13.2(1) of the Instrument, all issues of interoperability would need to be resolved prior to the recognition, or exemption from recognition, of a competitor clearing agency.
Requirements applicable to information processors	Two commenters recommend that the proposed one hour recovery time for the Information Processor be moved to a best efforts standard while another commenter believes that it should be reduced to no more than thirty minutes. One commenter notes that the IP currently runs in a hot-hot environment where two sites (Primary and Secondary) are running in parallel, each operating independently of the other to ensure that if one site is down, the other can remain fully functional with minimal impact to subscribers. Should an unforeseen event occur where both production sites are affected, the IP may not be able to control the total downtime.	In terms of shortening the time period for the resumption of operations of key systems following the declaration of a disaster, our view is that one hour strikes the appropriate balance between having critical systems resume operations in a timely manner and allowing the IP sufficient time to diagnose and rectify systems issues in the event of disruption. We have revised section 14.6 of the Instrument to require an information processor to establish, implement and maintain *policies and procedures* reasonably designed to ensure system recovery within the prescribed timeframes.