

**Principles for the Oversight of Screen-Based
Trading Systems
for Derivative Products – Review and
Additions**



**Report of the Technical Committee
of the
International Organization of Securities Commissions**

October 2000

I. Executive Summary

This Report reaffirms the continuing appropriateness of the ten *Principles for the Oversight of Screen-Based Trading Systems for Derivative Products* approved by the IOSCO Technical Committee in November 1990 ('the 1990 Principles')¹. It also adds four additional principles for the supervision of exchange-operated, screen-based trading systems for derivatives that operate with 'direct access'² participants from multiple jurisdictions ('cross-border markets').

To promote the effective and efficient control of risks to investors, market integrity and financial stability that may arise from the operation of exchange-operated, screen-based trading systems for derivative products that operate with direct access participants from multiple jurisdictions ('cross-border markets'), regulatory authorities should take into account the following additional principles.

- 1. Regulatory authorities with responsibilities arising from the operation of cross-border markets for derivative products ('relevant regulatory authorities'³) should develop cooperative arrangements and coordinate supervisory responsibilities, consistent with each authority's responsibilities and in a manner that promotes regulatory effectiveness and avoids the imposition of unnecessary regulatory costs.*
- 2. Each regulatory authority with responsibilities related to a cross-border market for derivatives (whether in respect of the market operator⁴ or the market participants) should be prepared to share relevant information in an efficient and timely manner. In developing cooperative arrangements, regulators should attempt to identify in advance the information needed, the sources of that information, the manner in which the information can be obtained and the channels through which it can be shared.*
- 3. The applicable regulatory requirements in the jurisdiction of each relevant regulatory authority and the framework for regulatory coordination and cooperation should be transparent.*
- 4. In considering their approach to cross-border markets for derivatives, access jurisdictions should take into account whether the initial jurisdiction authorizing the market operator applies the IOSCO Objectives and Principles of Securities Regulation (September 1998) and the 1990 Principles as supplemented above.*

¹The 1990 Principles are set out in Appendix 1.

²'Direct access' participants are entities having unintermediated access to the trading system.

³ The term "relevant regulatory authority" means the regulator of the market or of the participant in the market and, dependent on relevant law, may include a governmental body, self-regulatory organization, a contracting party subject to oversight by a governmental body, or a combination of one or more of the foregoing.

⁴ The key terms used in the four additional principles have the same meaning as analogous terms used in the 1990 Principles. 'Market operator' equates to 'system sponsor', and 'market participant' equates to 'system user'.

II. Introduction

Since the publication in 1990 of the *Principles for the Oversight of Screen-based Trading Systems for Derivative Products* ('the 1990 Principles'), derivatives exchanges around the world have been progressively moving towards the adoption of electronic trading platforms for all or parts of their business. As the processing power and sophistication of screen-based trading systems have increased, and their costs fallen, they have become the predominant trading method in many markets.

A particularly significant feature of electronic markets is the possibility that they offer for participants to obtain direct access from anywhere in the world. As a result, many exchange-operated, screen-based trading systems for derivative products now have participants not only in the country of a regulator which initially authorizes the operator of a screen-based derivatives trading system ('the initial jurisdiction')⁵ but also in one or more additional countries ('access jurisdiction(s)')⁶. However, while technology removes some of the former geographic restraints to the cross-border provision of exchange and related services (such as clearing and settlement), it also means that regulators in a number of different countries may have jurisdiction over one or more aspects of the electronic system or transactions effected on the system.

In order to evaluate these developments and issues, and their implications for the continuing appropriateness of the *1990 Principles*, the IOSCO Technical Committee, during its February 1999 meeting, directed its Working Group on the Regulation of Secondary Markets (TCWG-2), to:

- survey the current use of exchange-operated, screen-based trading systems for derivative contracts without regard to the nature of the underlying, including issues related to domestic and cross-border access to such systems, and survey the current regulatory approaches for the approval and oversight of such screen-based trading systems; and
- based on its analysis of the surveys, review and if necessary expand upon the Report of the Technical Committee entitled 'Principles for the oversight of screen-based trading Systems for derivative Products (1990)' in light of developments since that report was published.

⁵ The term "initial jurisdiction" means for the purposes of this text the jurisdiction in which the market is "initially" established and authorized.

⁶ The Term "access jurisdictions" means for the purposes of this text jurisdictions in which participants have direct access to a screen based derivatives trading systems authorized in an other country. The authorities in these access jurisdictions may require the authorization of the operation of a screen based derivatives trading systems by, for example, granting registration, or allowing a system to operate in its jurisdiction under an exemption from registration, perhaps subject to conditions.

TCWG-2 conducted two surveys, and collated the responses, during the period of March – October 1999. One survey addressed current use by exchanges of screen-based derivatives trading systems, and the other addressed current regulatory approaches for the approval and oversight of such systems. (*IOSCO Technical Committee Working Group on the Regulation of Secondary Markets Collation of Responses: Survey on Regulation of Exchange Screen-Based Trading Systems – Part 1 – Exchange Information* (October 28, 1999); and *IOSCO Technical Committee Working Group on the Regulation of Secondary Markets Collation of Responses: Survey on Regulation of Exchange Screen-Based Trading Systems – Part 2 Regulatory Information* (October 28, 1999))⁷.

At the Technical Committee meeting on October 28, 1999, TCWG-2 reported that its preliminary conclusion was that *the 1990 Principles*, approved and publicly released by the Technical Committee in 1990, still held good, but that it would be beneficial to develop additional principles to provide guidance to regulators in their approaches to cross-border markets.

TCWG-2 has developed these principles solely in relation to exchange-operated, screen-based trading systems for derivative products (e.g. futures and options), in accordance with the mandate received from the Technical Committee. While the Principles may potentially have wider application, TCWG-2 has not addressed the additional issues that would arise in the case of non-exchange trading systems, systems that trade instruments other than derivatives, or systems that facilitate access to such systems (e.g., electronic order-routing software). Both are areas that would require further work.

TCWG-2 also developed a chart that, according to these new principles, sets out how the regulatory interests or objectives of the relevant regulatory authorities are being approached in practice. It is intended to assist regulators in considering (or assessing the practicability of) various means or techniques to coordinate and cooperate in their respective regulatory oversight, monitoring and enforcement efforts in an efficient and effective manner. The chart, however, is not intended to prescribe solutions or to circumscribe, define or allocate regulatory jurisdiction, but instead to assist in developing cooperative arrangements and coordinating supervisory responsibilities where permitted by, and subject to, applicable national law or agreed international standards.

⁷ Only the second survey has been included in Appendix 2 because the first one was recognized by TCWG-2 as already outdated at the time of the public release of the present paper. A key reason for this is the increasing use of electronic trading systems for derivatives and the rapid rate of change of related exchange structures.

III. Discussion

Part 1: Endorsement of the 1990 Principles

In the view of the Technical Committee, the *1990 Principles* remain an appropriate and flexible framework for the oversight of screen-based derivative trading systems despite the evolution and increasing sophistication of electronic systems in the ten years since their adoption. Since their adoption, the ten 1990 Principles have anticipated well the subsequent development of electronic trading, and the survey conducted by TCWG-2 in 1999 (referred to in the section above) confirmed that they have gained widespread support among Technical Committee members as a sound basis to guide the authorization and review process of screen-based derivatives trading systems.

While a majority of the surveyed jurisdictions reported that they had no published laws or regulations explicitly relating to screen-based derivatives trading and relied instead on their general domestic exchange authorization frameworks to address electronic trading, most jurisdictions also reported that they had adopted the *1990 Principles* and utilised those standards in applying their general exchange authorization regulations. Even where not explicitly adopted, *the 1990 Principles* are taken into account. Thus, *the 1990 Principles* constitute an internationally accepted framework for the oversight of screen-based derivatives trading systems.

Furthermore, the Technical Committee considers that *the 1990 Principles* not only address the main issues that market authorities should address in their approaches to the oversight of these systems but that they adequately anticipated the *IOSCO Objectives and Principles of Securities Regulation (the 'Objectives and Principles')* adopted and publicly released in September 1998. In particular, *the 1990 Principles* support *the Objectives and Principles* in the following ways:

Protection of investors

- The system sponsor should be able to demonstrate that the system meets applicable legal standards, regulatory policies, etc. (Principle 1).
- The system sponsor and/or relevant regulatory authorities should ensure that users and their customers are adequately informed of the significant risks of trading through the system (Principle 9).
- Procedures should be developed to ensure that the sponsor, providers and users are responsive to directives of relevant regulatory authorities (Principle 10).

Ensure that markets are fair, efficient and transparent

- There should be equitable availability of accurate and timely trade and quotation information and transparency of processes for this (Principle 2).
- The order execution algorithm should be transparent to the regulatory authorities⁸ (Principle 3).
- The technical operation of the system should be equitable to all participants (Principle 4).
- The system and system interfaces should be subject to objective risk assessment (Principle 5).
- There should be procedures to regulate access and ensure competence of users (Principle 6).
- There should be mechanisms to ensure availability of information needed for supervision and enforcement (Principle 8).

The reduction of systemic risk

- Relevant regulatory authorities and system sponsors should consider any additional risk management exposures pertinent to the system, including those arising from interaction with other financial systems (Principle 7).

The Technical Committee further considers that *the 1990 Principles* have been set at a level that delivers focused guidance while simultaneously providing sufficient flexibility to accommodate both national differences in the organization of market oversight and the continuing evolution of exchanges and the trading process.

⁸ The Technical Committee considers that this is not intended to be exclusive i.e., it should not prevent making the rules governing the execution of the contract (the execution algorithm) transparent to market participants, too.

Part 2: Principles for supervision of screen based trading systems for derivative products operating on a cross-border basis

While the Technical Committee recognizes that *the 1990 Principles* continue to provide a sound regulatory framework for screen-based derivatives trading systems, it notes that they focus substantially on the regulation of the system operator. However, given the capacity of electronic derivatives trading systems to provide direct access to participants outside the country in which the market operator is initially authorized, their operation is also likely to raise issues for regulators in the jurisdictions where participants are located. In light of the potential regulatory duplications, contradictions and/or gaps that may arise, the Technical Committee believes that IOSCO members would benefit in developing their regulatory approaches in these circumstances by applying the four principles set out in the Executive Summary, and discussed at greater length in the rest of this section.

Potential benefits of cross-border markets

Properly regulated, electronic trading systems offering market participants the opportunity to enter directly into the trading process from anywhere in the world have the potential to contribute materially to increasing the efficiency of the market process. In particular, they may:

- make more instruments accessible to larger pools of liquidity, thus helping to promote the efficient allocation of resources;
- enable investors more easily to deploy their savings internationally, also helping to promote the efficient allocation of resources;
- give intermediaries the opportunity to enhance their operating efficiency by enabling them to participate in markets in which otherwise they might not, and/or to centralize their regional or global trading operations;
- give the operators of trading platforms greater opportunity to increase volumes, and to achieve economies of scale; and
- open the trading process to more vigorous competition and innovation.

Regulatory issues

However, systems with participants in multiple jurisdictions also raise fundamental questions as to how regulators in each of those jurisdictions should best:

- discharge and coordinate their individual regulatory responsibilities arising from the operation of the market;
- address any additional regulatory risks that arise from the cross-border nature of the market;
- promote effective regulation while avoiding unnecessary costs.

At present, these questions raise issues - such as the definition of a market's boundaries and the coordination of regulatory responsibilities - on which there is no universal legal or regulatory approach. This position arises, at least in part, because most market regulation laws were enacted to address a world in which market operators and market participants were located in the same jurisdiction.

The information provided in the responses (Part 2) to the survey (attached as Appendix 2) reveals that most (though not all) member regulators permit a foreign system to operate in their jurisdiction only through formal authorization procedures, reciprocal arrangements or other recognition procedures.

Most respondents also noted that they depended on general regulatory cooperation and formal memoranda of understanding and other cooperative arrangements to assist their supervision of cross-border systems. These arrangements are particularly important given that many jurisdictions require some form of authorization for remote membership. Some member regulators equate remote membership with the operation of the market in their jurisdictions.

While national laws will always determine how regulators approach jurisdictional issues, regulators need, within this framework, to develop approaches that enable them to meet their market integrity, investor protection and financial stability obligations effectively and without imposing unreasonable costs on a market. But whatever arrangements may be appropriate to a particular situation, the starting point must be the sharing of a common understanding of the responsibilities of each relevant regulatory authority. This will help to foster the development of appropriate co-ordination and information-sharing arrangements in line with the principles set out below.

Principle 1

Regulatory authorities with responsibilities arising from the operation of cross-border markets for derivatives products ('relevant regulatory authorities') should develop cooperative arrangements and co-ordinate supervisory responsibilities, consistent with each authority's responsibilities and in a manner that promotes regulatory effectiveness and avoids the imposition of unnecessary regulatory costs.

Potential regulatory duplication, inconsistencies and gaps

When a market operator based in one location admits participants based in other jurisdictions, relevant regulatory authorities in each jurisdiction may assert the right to regulate the market. This may lead to regulatory duplications, inconsistencies or 'gaps'.

There are a number of areas in which regulatory duplications and contradictions could occur. For example, the regulatory framework in the jurisdiction initially authorizing the market operator may provide for wide-ranging regulatory responsibilities in respect of the participants, in some cases extending to their prudential supervision and/or some aspects of their conduct of business in relation to customers. However, in other jurisdictions the regulatory authorities responsible for the licensing and oversight of participants will consider such requirements as duplicative, and potentially inconsistent with their own responsibilities. Indeed, in some cases, these latter regulatory authorities may also view the regulation of any markets in which their firms are participants as an integral part of their own investor protection process.

In addition to potential regulatory duplication, cross-border markets could also lead to regulatory 'gaps'. These are most likely to occur where there are substantial differences in the regulatory standards applied in the jurisdiction of each relevant regulatory authority – in respect of market abuse, for example - or where there is inadequate provision for information-sharing.

Arrangements for coordination of responsibilities and co-operation

To address these issues, in a way that delivers regulation consistent with each relevant regulatory authority's responsibilities and avoids unnecessary regulatory cost, regulators can consider a variety of approaches. These may include any or all of the following:

- coordination of regulatory responsibilities for specific matters;
- information-sharing arrangements;
- other cooperation arrangements.

The approach selected may vary, depending on such issues as the relative regulatory approach in each jurisdiction, the nature of the market, the extent of retail investment, product or corporate linkages with related markets in access jurisdictions, etc⁹. These arrangements may involve a combination of these approaches. It may also be influenced by other factors, such as the types of product traded, the depth of the market and the degree to which the trading of a product in the authorizing jurisdiction can affect, through electronic links, the market for the underlying in the participant's jurisdiction, or the existence of formal linkages between market operators in different jurisdictions.

The form of regulatory coordination or cooperation is likely to vary according to the situation, and as indicated in Principle 2, the willingness of regulatory authorities to develop cooperative arrangements and coordinate supervisory responsibilities such as by placing reliance on other regulators, is likely to be influenced by the regulatory standards adopted by other regulators¹⁰. The goal of effectiveness is as important as the goal of efficiency.

The appropriateness of the various techniques and the ability of the various parties to use them will be determined by a number of factors, including the nature of the market, product and participants¹¹; the degree of existing harmonisation between authorising and access jurisdictions; applicable national law and international standards; and, the powers or practical

⁹ Derivatives exchange linkages are generally formed to establish commercial benefits in one or more of the following forms: access via each participating exchange to the products of other participating exchanges, the pooling of products, or the sharing of technology or other services (e.g. clearing). The regulation of exchange linkages per se is not a primary focus of this paper. However, many of the considerations in that context will be similar to those arising from the more general issues addressed in this paper.

¹⁰ For example, the European Union's Investment Services Directive (ISD- art. 15, par. 4) provides for a "regulated market" to provide appropriate facilities in other Member States without any additional regulatory requirements, on the basis that the market is subject to regulation in the state in which it has its head office and members are subject to prudential requirements laid down in their home country and conduct of business rules in force in the country where they provide services. Although the ISD says little about the standards of regulation expected of a "regulated market", the Forum of European Securities Commissions (FESCO) has recently established 18 core standards for regulated markets, which also take into account the IOSCO Objectives and Principles.

¹¹ For example, the markets in derivatives based on equities may involve additional issues.

capability to provide and terminate access, intervene or affect trading activity, obtain needed information, or to enforce sanctions.

Principle 2

Each regulatory authority with responsibilities related to a cross-border market for derivatives (whether in respect of the market operator or the market participants) should be prepared to share relevant information in an efficient and timely manner. In developing cooperative arrangements, regulators should attempt to identify in advance the information needed, the sources of that information, the manner in which the information can be obtained and the channels through which it can be shared.

Adequate and effective information-sharing arrangements are likely to be key to preventing regulatory ‘gaps’ in cross-border markets. Information-sharing arrangements of some kind will be needed in any event. But the extent and importance of these arrangements may well grow when relevant regulatory authorities share or coordinate regulatory responsibilities with another regulator well-placed to undertake a particular regulatory function.

Regulatory authorities responsible for the oversight of the market operator are likely to want to see arrangements that provide for obtaining, through appropriate channels, information relating to:

- the continuing financial and operational soundness of participants and compliance with other eligibility requirements (e.g. fitness and properness) and
- customer identification when needed for investigating and prosecuting market abuse.

Regulators with responsibility for the oversight of market participants are likely to need information pertinent to:

- the general oversight of markets in the authorizing jurisdiction and significant changes in that approach;
- the regulation of the exchange, the identity and involvement of the participants which they regulate, and the exchange’s capacity to continue delivering its service;
- legal, regulatory and other actions being taken to address financial problems that may affect their participants in the market individually or present systemic problems for the financial system;
- the implementation and enforcement of conduct of business rules or market abuse rules;

- trading in the underlying instruments of issuers in relevant jurisdictions or in relation to the trading of related instruments in relevant jurisdictions; and
- investigations to detect unlawful activity by persons in their jurisdiction or likely to have a material impact on persons in their jurisdiction.

In all cases, it is highly desirable that relevant regulatory authorities attempt to identify and agree in advance:

- the information to be shared, on a routine and/or on an event-driven basis;
- the manner in which the information can be obtained, and
- the channels through which it is to be shared.

A critical requirement in any information-sharing arrangement is the legal ability of the parties to obtain and share information. With a cross-border market, this is potentially more complex – for instance, where the regulatory authorities in participant jurisdiction ‘A’ require information on participants regulated in jurisdictions ‘B’ and ‘C’. In order to facilitate effective information-sharing with respect to market participants, consideration could be given to the market’s rules providing, or other arrangements being in place to provide, that information regarding the identity, financial soundness, location and transactions of all persons having direct access to the trade matching facility of the system may, in specified circumstances, be shared with other relevant regulatory authorities.

In assessing their information needs, regulators should, however, also bear in mind the costs and benefits of supplying those needs, both in terms of information collection and its delivery.

Principle 3

The applicable regulatory requirements in the jurisdiction of each relevant regulatory authority and the framework for regulatory coordination and cooperation should be transparent.

Markets should be transparent in respect of their rules, practices and other matters that may be material to users of the market. Market participants in particular need to have access to sufficient information to be able to form a judgment as to the nature of the service they can expect, the general

standards expected of users, and specific risks that may attach to using the derivatives market.

The principle of transparency applies equally in the case of cross-border markets. Market operators should require that all participants, regardless of the country in which they are located, are treated on an equal basis consistent with each jurisdiction's laws and regulations; further, market operators should take any additional measures necessary to give foreign participants access to the same information as domestic ones. Where a relevant regulatory authority has regulatory provisions that may affect participants or their customers in another jurisdiction, it should make such provisions transparent to all other relevant regulators and market participants.

Principle 4

In considering their approach to cross-border markets for derivatives, access jurisdictions should take into account whether the initial jurisdiction authorizing the market operator applies the IOSCO Objectives and Principles of Securities Regulation (September 1998) and the 1990 Principles as supplemented above.

It is important to all investors and market participants that the markets they use operate according to high standards. As many markets become increasingly international in character, both in terms of end investors and 'remote' members, investor confidence rests heavily on these high standards being adopted universally. It also follows that the more that all jurisdictions adopt such standards, the more that regulators in each jurisdiction will feel comfortable sharing information or coordinating regulatory responsibilities, where they are legally able, in circumstances where this is likely to provide an effective and efficient solution.

To this end, IOSCO has worked over a number of years to develop, promote and gain formal support for high regulatory standards in markets.¹² In September 1998, IOSCO adopted the Objectives and Principles of Securities Regulation. This established a comprehensive framework to guide national regulators in their approach to securities regulation. The introduction notes that "sound and effective regulation and, in turn, the confidence it brings is

¹² A number of other international organizations, such as COSRA (Council of Securities Regulators of the Americas) and FESCO (Forum of European Securities Commissions) perform a similar role on a regional basis.

important for the integrity, growth and development of securities markets.’ It goes on to stress the need for regulators to address the challenges posed by the increasing importance of technology and electronic commerce, and the need, in an increasingly global marketplace, for a common set of guiding principles and shared regulatory objectives.

The survey conducted by TCWG-2 in 1999 revealed that the nineteen regulatory authorities surveyed had adopted, or otherwise took into account, *the 1990 Principles* in their regulatory review or authorization of electronic derivatives trading systems. This applied with regard to both domestic systems and, where they required licensing, to foreign systems offering domestic persons and firms access to the system's trade matching facility.

Establishing standards is, however, only a first step. Confidence depends as much on implementation as aspiration. While countries take different approaches to the way in which they implement regulation – some preferring a rule-based framework while others rely more on guidance - it is important to international confidence in cross-border markets that regulatory authorities are sufficiently explicit and transparent in setting out their approaches to regulation.

Part 3: Regulatory objectives and issues regarding cooperation and coordination by regulators in respect of cross-border markets for derivatives¹³

Regulatory issue	Regulatory objectives	Issues relevant for cooperation and coordination ¹⁴
<i>Product regulation</i>		
<i>Standards and processes for admission to trading (and any subsequent information disclosure)</i>	IP ¹⁵ MI ¹⁶ Sound contract structure Adequate disclosure (where relevant) Appropriate controls on investor eligibility/suitability for private/retail investors	<ul style="list-style-type: none"> ◇ Initial jurisdiction¹⁷ reviews or approves the contract structure (including terms and conditions) and information disclosures. ◇ Access jurisdiction¹⁸ with responsibility for listing and/or trading oversight in the underlying may need information to exercise its regulatory functions. ◇ Access jurisdiction sets investor eligibility rules and risk disclosure requirements. These may reinforce, or extend, any investor eligibility requirements set by the jurisdiction authorizing the market operator.

¹³ The chart has been developed by TCWG-2 to set out, according to the new principles discussed in this paper, how the regulatory interests or objectives of the relevant regulatory authorities are being approached in practice. The chart is intended to assist regulators in considering (or assessing the practicability of) various means or techniques to coordinate and cooperate in their respective regulatory oversight, monitoring and enforcement efforts in an efficient and effective manner. The chart, however, is not intended to prescribe solutions or to circumscribe, define or allocate regulatory jurisdiction, but instead to assist in developing cooperative arrangements and coordinating supervisory responsibilities where permitted by, and subject to, applicable national law or agreed international standards.

¹⁴ In some jurisdictions, regulatory standards and approaches are set, and approvals and guidance given, by either the government regulator, a self-regulatory organization, or both.

¹⁵ IP = Investor protection; MI = Market integrity; FS = Financial stability

¹⁶ The design of the product is relevant to ensure Market Integrity since the proper design of terms and conditions of a derivative product reduces its susceptibility to market abuses.

¹⁷ The term “initial jurisdiction” means for the purposes of this text the jurisdiction in which the market is “initially” established and authorized.

¹⁸ The term “access jurisdictions” means for the purposes of this text jurisdictions in which participants have direct access to a screen based derivatives trading systems authorized in an other country. The authorities in these access jurisdictions may require the authorization of the operation of a screen based derivatives trading systems by, for example, granting registration, or allowing a system to operate in its jurisdiction under an exemption from registration, perhaps subject to conditions.

Regulatory issue	Regulatory objectives	Issues relevant for cooperation and coordination ¹⁴
Market regulation		
Member/ participant admission	IP MI Participants and investors should trade only in markets in which all participants are: - required to meet minimum prudential standards and requirements related to financial and operational soundness (including technical competence requirements); - able to settle their obligations in full and on time. (See also under clearing and settlement)	<ul style="list-style-type: none"> ◇ Initial jurisdiction sets the admission criteria for market participants (including participants which are not authorized intermediaries) . ◇ Access jurisdiction can set different requirements for authorized participants. Some initial jurisdictions rely on access jurisdictions with regard to prudential requirements and leave all conduct of business regulation (to access jurisdictions¹⁹). ◇ In order to discharge its regulatory responsibilities, initial jurisdiction needs to obtain information on initial and continuing financial and operational soundness of participants located in access jurisdictions.
Trading process	IP MI Fair and orderly markets, with (in particular) high quality price-formation and appropriate levels of transparency.	<ul style="list-style-type: none"> ◇ Initial jurisdiction establishes the trading rules.
Market abuse	IP MI Deterrence of market manipulation, insider trading and fraud.	<ul style="list-style-type: none"> ◇ Initial jurisdiction sets rules prohibiting abuse on the market . ◇ Access jurisdiction rules on market abuse may be different from those laid down by the initial jurisdiction but remain applicable in respect of abusive behavior affecting its firms or investors. ◇ Initial and access jurisdictions need to share information to carry out their responsibilities and enforce the relevant provisions with respect to participants located in their respective jurisdictions.

¹⁹ This is the case, for instance, within the European Union because of the harmonization brought about by the ISD, and in Switzerland

Regulatory issue	Regulatory objectives		Issues relevant for cooperation and coordination¹⁴
<i>Technical standards</i>	MI	Systems designed to (inter alia) deliver service advertised, handle orders equitably, operate reliably, and have adequate back-up and contingency arrangements.	◇ Initial jurisdiction can establish standards for management of market systems and technical access.
<i>Clearing & settlement²⁰</i>	IP MI FS	The full and timely discharge of obligations. Risk management procedures Satisfactory procedures for the handling of default.	◇ The issues relevant for coordination and cooperation amongst competent authorities in the area of clearing and settlement may differ from those discussed in this paper. This is a rapidly evolving area which is outside the scope of the present work. Other working groups, such as the joint IOSCO CPSS Task Force on Securities Settlement Systems, are addressing these issues.
<i>Member regulation</i>			
<i>Conduct of business</i>	IP	Fair treatment of participants' customers in respect of trading conducted for them on the market.	◇ Initial and access jurisdictions set the conduct of business rules which apply to market participants. ◇ Initial and access jurisdictions need to share information in order to carry out their regulatory responsibilities and enforce their rules.
<i>Monitoring</i>			
<i>Monitoring of market rules</i>	IP MI	To ensure compliance with market rules.	◇ Initial jurisdiction sets requirements for monitoring compliance with market rules. ◇ Information-sharing agreements may be needed to support monitoring of compliance with market rules.
<i>Monitoring for market abuse</i>	IP MI	To ensure compliance with rules/laws intended to protect market and participants (e.g. insider trading and manipulation).	◇ Initial jurisdiction establishes and oversees requirements for market monitoring. ◇ Access jurisdiction has responsibilities for monitoring violation of its own market abuse rules. ◇ Initial and access jurisdictions need to share information to carry out their surveillance activities.

²⁰ The paper does not address the issue of contracts traded in one jurisdiction and cleared in another.

Regulatory issue	Regulatory objectives		Issues relevant for cooperation and coordination ¹⁴
<i>Monitoring for customer abuse</i>	IP	To provide basis for enforcement action against market participants treating their customers unfairly in respect of trading on the market, e.g. poor execution, front running.	<ul style="list-style-type: none"> ◇ Initial and access jurisdictions have responsibilities for establishing monitoring requirements for the conduct of business of participants when they deal with their national customers. ◇ Initial and access jurisdictions need to share information to carry out their surveillance activities, particularly where the customer and the market participants are not located in the same jurisdiction.
Enforcement			
<i>Enforcement of market rules</i>	IP MI	To sanction offenders, deter further abuse, demonstrate that investors may have confidence in the market authorities.	<ul style="list-style-type: none"> ◇ Initial jurisdiction ensures that market rules are enforced. Arrangements are likely to be needed with access jurisdiction to assist with enforcement.
<i>Enforcement of market abuse laws</i>	IP MI	To sanction offenders, deter further abuse, demonstrate that investors may have confidence in the authorities responsible for enforcement against market abuse (e.g. insider trading and manipulation).	<ul style="list-style-type: none"> ◇ Initial jurisdiction enforces its rules on market abuse. ◇ Access jurisdiction has responsibility for enforcement of its own market abuse rules; ◇ Co-ordination agreements between initial and access jurisdictions may be required to support cross-border enforcement.
<i>Enforcement of conduct of business rules</i>	IP	To sanction offenders, deter further abuse, demonstrate that investors may have confidence in participant regulators and/or the market authorities.	<ul style="list-style-type: none"> ◇ Initial and access jurisdictions have responsibilities for the enforcement of the conduct of business rules on market participants located in their respective jurisdictions when they deal with their national customers; ◇ Initial and access jurisdictions need to share information to carry out their enforcement activities, including when market participant and customer are located in different jurisdictions

Appendix 1: IOSCO Technical Committee 1990 Principles for the Oversight of Screen-Based Trading Systems for Derivative Products

1. The system sponsor should be able to demonstrate to the relevant regulatory authorities that the system meets and continues to meet applicable legal standards, regulatory policies, and / or market customer or practice where relevant.
2. The system should be designed to ensure the equitable availability of accurate and timely trade and quotation information to all system participants and the system sponsor should be able to describe to the relevant regulatory authorities the processing, prioritization, and display of quotations within the system.
3. The system sponsor should be able to describe to the relevant regulatory authorities the order execution algorithm used by the system, i.e. the set of rules governing the processing, including prioritization, and execution of orders.
4. From a technical perspective, the system should be designed to operate in a manner which is equitable to all market participants and any differences in treatment aiming classes of participants should be identified.
5. Before implementation, and on periodic basis thereafter, the system and system interfaces should be subject to an objective risk assessment to identify vulnerabilities (e.g. the risk of unauthorized access, internal failures, human errors, attacks, and natural catastrophes) which may exist in the system design, development, or implementation.
6. Procedures should be established to ensure the competence, integrity, and authority of system users, to ensure that systems users are adequately supervised, and that access to the system is not arbitrarily or discriminatorily denied.
7. The relevant regulatory authorities and the system sponsor should consider and additional risk management exposures pertinent to the system, including those arising from interaction with related financial systems.
8. Mechanisms should be in place to ensure that the information necessary to conduct adequate surveillance of the system for supervisory and enforcement purposes is available to the system sponsor and the relevant regulatory authorities on a timely basis.
9. The relevant regulatory authorities and / or the system sponsor should ensure that system users and system customers are adequately informed of the significant risks particular to trading through the system. The liability of the system sponsor, and / or the system providers to system users and system customers should be

described, especially any agreements that seek to vary the allocation of losses that otherwise would result by operation of law.

10. Procedures should be developed to ensure that the system sponsor, system providers, and system users are aware of and will be responsive to the directives and concerns of relevant regulatory authorities.

Appendix 2:

**IOSCO TECHNICAL COMMITTEE WORKING GROUP ON THE
REGULATION OF SECONDARY MARKETS**

COLLATION OF RESPONSES:

**SURVEY ON REGULATION OF EXCHANGE SCREEN-BASED²¹
TRADING SYSTEMS –PART 2**

1999

October 28,

²¹ ²¹ The answers to the questionnaire were provided by the respondent jurisdictions during the period between March and April 1999.

INTRODUCTION

This paper collates the responses to a survey on regulation of electronic trading systems that was conducted by the IOSCO Technical Committee Working Group on the Regulation of Secondary Markets (TCWG-2) pursuant to the following mandate of the Technical Committee (adopted at the Technical Committee meeting in London on February 4, 1999):

- *TCWG-2 will survey the current use of exchange screen-based trading systems for derivative contracts without regard to the nature of the underlying, including issues related to domestic and cross-border access to such systems, and survey the current regulatory approaches for the approval and oversight of such screen-based trading systems.*
- *Based on its analysis of the surveys, TCWG-2 will review and if necessary expand upon the Report of the Technical Committee entitled Principles for the Oversight of Screen-Based Trading Systems (1990) in light of developments since that report was published.*

Background

The IOSCO Technical Committee accepted, during the 23rd Annual Conference of IOSCO in Nairobi, Kenya, a recommendation from the Burgenstock meeting of derivatives regulators that IOSCO should undertake further work on the regulation of screen-based trading systems for derivative products. The Technical Committee requested that TCWG-2 explore this issue further and develop a mandate and a working program that would include a survey of existing rules and practices.

Since the publication in 1990 of the *Principles for the Oversight of Screen-Based Trading Systems (1990 Principles)*, technology and market practices have developed very rapidly. Today, screen-based trading systems pose a challenge to the traditional dominance of floor-based trading, and are changing the way customers as well as brokers place orders and trade on exchanges.

The purpose of this project is to review and, if necessary, expand upon the *1990 Principles*. The study of the rapidly changing environment is intended to identify whether the new technology poses any new challenges to regulators, such as with respect to their approval or authorization of such systems (*e.g.*, what further risks, if any, are raised by the increasing technological capabilities of such systems) and to their continuing oversight of such systems, particularly in light of the increasing demand for cross-border access to these systems. Principal areas that the project would focus on include: (1) mechanisms that facilitate access to exchanges by customers of exchange members, (2) access to exchange trading systems by non-domestic parties and (3) access by domestic parties to exchange trading systems in foreign jurisdictions. Benefits of the new technology also will be considered.

TCWG-2 members discussed the survey responses on a preliminary basis at a meeting in Toronto on October 7 and 8, 1999. Although there may be several areas that could be subject to minor revision (*see* responses to question 47), in general members concluded that the *1990 Principles* remain highly relevant. Members noted, however, that the current work remains inconclusive and that further work may be needed in two main areas not addressed by the *1990 Principles*: cross-border linkages and screen-based trading systems not operated by exchanges.

[Note: The survey responses were completed over a period from March - October 1999. The responses are intended as *general summaries* of the law and policies then in effect, but should not be viewed as complete restatements of law. This area of regulation is subject to ongoing development in many jurisdictions.]

SUMMARY OF RESPONSES

Explicit requirements ²²

- 1. Does your jurisdiction have any laws, rules or regulations relating specifically to electronic screen-based trading? If so, please identify the legislation and outline the main points.**

The majority of jurisdictions reported no published laws or regulations explicitly relating to electronic trading.

Germany, Spain, Singapore and the US SEC reported laws or regulations specifically addressing electronic systems.

Page 1

- 2. As market supervisor/authority, do you have any published regulations/performance criteria/guidance relating specifically to screen-based trading systems? If so, please outline (briefly) the main points.**

The majority of jurisdictions do not have such explicit published rules or guidance.

But see # 3: all jurisdictions either have adopted or follow the IOSCO Principles.

France, the Netherlands and the US CFTC reported explicit guidance.

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- 3. Have you adopted the 1990 IOSCO Principles for the Oversight of Screen-Based Trading Systems? If so, please describe generally how each of the 1990 Principles has been applied to your supervisory/review process?**

The majority of jurisdictions report adoption of the IOSCO principles.

Even where not explicitly adopted, the 1990 principles are taken into account.

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²² Unless otherwise specified, please answer the following questions from the perspective of a domestic regulator of a domestic screen-based trading system that (a) concludes or executes a legally-binding transaction, (b) is non-proprietary (*i.e.*, not operated by an individual intermediary) and (c) trades derivative products. Issues concerning foreign-based systems and access to such systems are addressed in a separate set of questions below. Issues regarding proprietary screen systems are beyond the scope of this survey.

Market Organization

4. Do you or any other authority have rules that require or prohibit a particular form of organization for electronic markets (*e.g.*, membership or publicly held)? If so, please explain. If shareholder organization is permitted, please note who may purchase shares.

The majority of jurisdictions do not require a particular form of organization for electronic markets.

Germany and Japan require exchanges to be membership organizations; Spain requires exchanges to be incorporated societies; Brazil requires that exchanges must be nonprofit civil associations and Malaysia permits only companies to maintain and operate markets (although there is no limitation on whether it is membership or publicly held). Under current Hong Kong legislation, the Stock Exchange of Hong Kong has the monopoly status to operate a stock market in Hong Kong.

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5. Does your approach to the regulation of screen-based trading systems differ depending upon the form of organization (*e.g.*, member vs. shareholder or for profit vs. non-profit)? If so, please explain generally the differences in approach and the criteria for drawing these regulatory distinctions.

None of the jurisdictions varies its approach to the regulation of screen-based systems based on differing forms of organization. But see Hong Kong.

Several jurisdictions note that to date they have only been presented with systems operated by organized exchanges.

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System authorization – responsibility and process

6. Do you impose any authorization, registration or licensing requirements on electronic markets? If so, please complete the questions below.

All jurisdictions impose authorization or licensing requirements on electronic markets.

Page 15

7. Please identify the market or other authority who reviews and/or approves the establishment or operation of screen-based trading systems in your jurisdiction (whether as a new system or a system offered by a previously authorized market). If different authorities have different roles, please explain.

See identification of regulatory authorities – securities/derivatives agency and/or Governmental Ministry.
Page 16

8. Describe generally the process for system review or authorization (e.g., filing requirements, documentation required, where system operator and sponsor are separate any separate approvals, time deadlines, notice and public comment requirements etc.). NOTE: Please distinguish review of system from review of products and address procedures for addressing revisions or modifications of rules.

Systems: All jurisdictions require submission of comprehensive information, typically all rules, by-laws and policies of the system, including contract terms and conditions.

Rule revisions: All jurisdictions require either preapproval of rule changes or a disallowance procedure.
Page 19

9. If there is an authorization process, describe briefly what standard must be met to receive approval or authorization.

The majority of jurisdictions follow explicit criteria mandated by laws or rules for authorization of markets.

As noted in #1, these laws/rules are the general laws authorizing markets and are not specific to electronic systems.
Page 27

10. What kind of professionals make these determinations or otherwise are involved in your analysis of systems (i.e., lawyers, computer specialists, economists etc.)?

Generally staff attorneys and economists or accountants are involved.

Nine jurisdictions report use of computer specialists (either on staff or independent consultants). **Page 33**

SUBJECTS OF INQUIRY

Technical

11. When assessing electronic screen-based trading systems (“trading system,” “electronic system” or “system”) (whether or not as part of an explicitly required process), which of the

following items do you examine? Please describe briefly the standards/requirements you are seeking.

- a) Access²³ requirements
 - b) Equality of access (differential access)
 - c) Transparency of orders and transaction information (e.g., prices, quantities, counterparties)
 - d) Capacity
 - e) Response time to all orders
 - f) System security
 - g) Data integrity
 - h) System back-up and disaster recovery
 - i) System architecture (e.g., connect with own equipment (open) or connect with provider's equipment (closed))
- Other

All jurisdictions report consideration of these factors.

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Access

12. Please describe your approach to the review and/or approval of the rules specifying the categories of persons who may “access” the screen-based system (*i.e.*, considered broadly as the entry of orders for execution on the system). [“Direct access” (*i.e.*, the ability to place orders directly to the system’s trade matching or execution function without the need for intermediation) should be distinguished from the transmission of customer orders via one or more intermediaries (e.g., customer uses electronic order routing system to place orders to an intermediary).]

Specifically, please describe the topics that you examine and/or review and note in particular whether you have any explicit requirements for obtaining access as a member, other permitted system participant, client or intermediary. Please describe and explain any differences. Among other things, please discuss if relevant:

- a) Regulatory authorization of any person with access to the system (*i.e.*, is regulatory authorization required?);
- b) Exchange membership or other participation standards (e.g., criteria regarding who may trade directly on the system; note whether non-members may have access);
- c) Criteria for access (e.g., whether orders must go through an intermediary, whether a member or regulated intermediary must supervise trading, any associated financial integrity controls (“credit or position limit filters,” whether any human intervention is required), scope of information displayed to clients, verification of users’ identity);
- d) Financial integrity standards (*e.g.*, clearing membership or clearing bond requirements for persons who enter orders for execution on the system, position limits);
- e) Operational standards (*e.g.*, criteria or restrictions concerning the specific individuals (*e.g.*, clerks, brokers, proprietary traders) who may input orders, where system terminals (if a dedicated system) or personal computers may be located, etc.); and
- f) User competency (*i.e.*, user certification, competency or training requirements).

(a) Access generally: In the first instance requirements permitting direct access to the electronic system are determined by the exchange.

²³ The term “access” refers broadly to the sending of orders and the execution of trades on an electronic system.

The following jurisdictions require persons having direct access to systems be registered or licensed: Australia; Canada, Ontario and Quebec; Italy; US SEC (only registered broker-dealers may be members).

(b) Exchange membership standards: Exchange rules determine criteria.

(c) Criteria for access: Customer orders must be intermediated by exchange member

“Filters:” The following jurisdictions report requirements mandating automated credit filters: Australia, Italy [ability to monitor and stop orders]; Hong Kong reports mandated credit and position limits .

(d) Financial integrity standards: In all jurisdictions clearing members remain financially liable for trades and remain subject to capital requirements and regulatory oversight. Australia reports review of exchange rules to require adequate financial filters to ensure compliance by member with capital requirement.

(e) Operational standards: Operational standards established by the exchanges, typically subject to regulatory review.

(f) User competency: Regulation is determined at the exchange level. Rules reviewed by regulator.

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13. Does your approach differ depending upon the technical nature of access or connection? For example:

- **Access through vendors**
- **Closed end system involving dedicated terminals**
- **Systems permitting access through personal computers**
- **Broker-provided “order routing” systems that direct orders into the screen-based system**

Internet

The majority of jurisdictions report no differences in approach based on technical nature of access. Presumably, the IOSCO Principles would be flexibly applied.

[3] jurisdictions report differing approaches based on technical nature of access [Australia, Canada – Ontario and Quebec]. *See also* the UK.

[3] jurisdictions note, however, that to date they have only addressed dedicated systems. [Italy, CFTC, Brazil].

Page 55

14. Do you have any specific requirements for electronic systems admitting remote members (*i.e.*, members located outside of your jurisdiction)? If so, please describe.

The majority permit remote membership and impose no special requirements.

See Germany which reports special requirements.

Brazil does not permit remote members. Japan does not have a category of remote members.

Singapore reports that SIMEX to date has not admitted remote members but would apply national treatment.

Page 57

15. Do you (or any other authority in your jurisdiction) place any restriction on a foreign (located) member of a domestic market having direct access to the domestic screen-based trading system? If so, please explain the rationale.

The majority report no restrictions on direct access by remote members.

Malaysia has not yet permitted remote membership.

Page 59

16. Do you have rules that address or require liquidity providers such as market makers? If so, please provide details. Please discuss whether your regulations impose any affirmative obligations on such liquidity providers (e.g., to make a market at a particular spread or quantity)?

All jurisdictions permit market makers or other liquidity providers.

All jurisdictions report that substantive regulation is imposed at the exchange level, with exchange rules reviewed and/or approved by the regulator.

Two jurisdictions have some requirements at the regulator level for liquidity providers: the US SEC and Brazil.

Page 60

Trading process

17. Do you examine and/or approve the system's order execution algorithm (i.e., the set of rules governing the processing, including prioritization, and execution of orders entered into a screen-based system). If so, please describe topics examined and note any explicit requirements.

All jurisdictions examine the order algorithm.

IOSCO Principle 3 is generally applied.

Page 63

18. Do you examine and/or approve the degree of system transparency (*i.e.*, the extent to which and timeliness by which relevant information is available in the system about open or unexecuted orders and completed transactions is available, including to third-party providers or over the Internet)? If so, please describe the topics examined and note any explicit regulatory requirements.

All jurisdictions examine transparency consistent with IOSCO Principle 2.

Page 65

19. Do you examine the technical aspects of order routing systems? If so, please describe briefly and note any explicit requirements.

The majority of jurisdictions report that order routing systems would be reviewed as part of the overall review of a system.

Canada – Ontario and Quebec currently require registration of order routing systems.

Italy and Spain report requiring of “filter;” CFTC requires automated credit or position limit filter or human checks prior to entry of order.

Page 68

20. Do you examine the order handling and entry processes of the system (*e.g.*, who can enter orders, waiting times, if any, types of orders accepted, (*e.g.*, market or limit orders etc.) order allocation and modification procedures, trade confirmations etc.? If so, please describe topics examined and note any explicit requirements.

All jurisdictions report that they examine these matters as part of their general review of systems. **Page 70**

21. Do you have any requirements as to the length of the trading day or when trading on the system can occur?

None of the jurisdictions imposes any requirements on length of trading day. This is a matter determined by the exchange.

Page 72

22. Do you examine the opening and/or closing price procedures, if any? If so, please describe and note any explicit requirements.

The majority of jurisdictions report examining opening and/or closing price procedures as part of their overall review of rules submitted during the authorization process. **Page 74**

23. Do you examine the system's specific procedures, if any, for handling errors? If so, please describe and note any explicit requirements.

The majority of jurisdictions examine the system's procedures for handling trading errors but there are no specific requirements **Page 76**

24. Do you examine the system's procedures for handling trading halts, including the treatment of orders pending in trading systems at the time of the halt?

The majority of jurisdictions report that they examine the procedures for handling trading halts. **Page 77**

Relevant Disclosures

25. Do you examine and/or review the rules providing for disclosure of relevant risks to system users and customers. If so, please describe any explicit requirements.

The majority of jurisdictions report that they examine the related risk disclosure documents.
In some jurisdictions, disclosure content is mandated by regulation [*see, e.g., Australia and Singapore*]. **Page 79**

26. Do you have any explicit requirements relating to limitation of liability for system malfunction?

The majority of jurisdictions do not impose any explicit requirements concerning limitation of liability.
Malaysia reports limitation of liability provision. **Page 81**

Records (audit trail)

27. Do you examine and/or approve rules or procedures that relate to the records that are generated by the screen-based system? Please describe any regulatory requirements, including access to records by the regulatory authority, and note any minimum levels of data required to be maintained. What data pertaining to trades is required to be entered into the system and when? For example:

- **information regarding trade data to be input before or after a trade (e.g., customer account information); and**
- **access to records by the regulatory authority.**

All respondents review and/or approve procedures for records generated by the system

All respondents require recordkeeping sufficient to audit the transaction.

Page 83

28. Do you have any regulatory requirements regarding how long such system records be retained and by whom?

The majority of reporting jurisdictions mandate minimum retention periods. Although Australia does not have a *statutory* requirement, the regulator and exchange agreed on such requirements during the exchange rule approval process.

Page 87

29. Do you have any requirements on the suitability of products specifically for screen-based trading? If so, please describe.

There do not appear to be any such specific “suitability of product” requirements for screen-based trading.

Page 89

30. Do you impose any restrictions on the type of products that may be traded on electronic systems or on who can trade particular products on the system (e.g., product restrictions applicable only to domestic users)?

The majority of jurisdictions report no such requirements unique to screen-trading systems (i.e., other than general product restrictions or requirements for registration .

Canada's proposed framework specifically would define the type of products that could be traded on an ATS (See Ontario and Quebec).

Page 91

31. Do you examine the clearing process? If so, please describe and note any explicit requirements.

All jurisdictions report that they review the clearing process but there are no specific requirements related to screen-based systems.

Page 92

32. Do you require screen-based systems to feed executed trade details directly to the settlement organization?

The majority do not report such a requirement.

Italy and Spain reported such a requirement.

Page 95

33. Access to clearing system:

a) Must clearing take place through an intermediary?

b) Can a domestic customer have direct access to clearing?

c) Do you (or any other authority in your jurisdiction) place any restriction on a foreign member of a domestic market having direct access to the clearing system (*i.e.*, by requiring them to make use of a domestic clearing member?)

If so, please explain the rationale.

(a) All reported "yes."

(b) The majority reported "no." Canada reported that a domestic customer may have direct access to clearing in limited circumstances (*e.g.*, banks); the US SEC noted that banks and insurance companies are types of entities that must be admitted as clearing members.

(c) The majority of jurisdictions report no restrictions. Japan and Brazil require local branches. Singapore appears to require that the foreign firm be a corporation.

Page 96

Orderly markets

34. Do you have special regulations/ guidance in respect of screen-based trading designed to maintain orderly markets (*e.g.*, circuit breakers, trading suspensions, imposition of trading limits) ? If so, please describe.

The majority of jurisdictions do not have any such requirements that are unique to electronic systems.
But see Malaysia.

Page 99

Compliance

35. Do you conduct direct oversight of trading?

Eleven jurisdictions report that the regulator has a market oversight function independent of the exchanges.

Page 101

36. Do you examine arrangements for monitoring trading and ensuring compliance with relevant requirements? If so, please describe and note any explicit requirements (e.g., authorization, trade and market surveillance, audit trail, etc.) relating to on-going surveillance of screen trading.

All jurisdictions report auditing for compliance with relevant requirements.
But see Malaysia.

Page 103

37. Please describe any specific market monitoring approaches you require for screen-based trading systems (or which you consider useful). Do you require real-time access (by the regulator) to trade data? If so, how is it used for surveillance purposes? Who else has real-time access to trade data?

Other than the minority of regulators who have access to real time trade data, the regulators do not describe any surveillance techniques that are unique to screen-trading systems.
The following jurisdictions report that the regulator having access to real time trade data: Australia, France, Germany, Hong Kong, Spain, Brazil and Malaysia.

Page 106

38. If the facility provider is an SRO, do you periodically assess the efficiency of self-regulatory programs for monitoring screen-based trading?

The majority answered “yes.”

Jurisdictions responding “no” either are in the process of implementing a formal oversight program , review compliance but not “periodically,” or the question was “not applicable.”

Page 108

Coordination with pit trading

- 39. Do you permit exchanges to operate screen-based trading in conjunction with off-screen trading (whether pit or ‘upstairs’ trading). If so, please describe any requirements you impose to ensure that price formation remains unified**

This question applies only to those jurisdictions that have both open outcry as well as electronic systems. In this regard, seven jurisdictions report that their exchanges are solely electronic. Seven respondents with open outcry and electronic trading responded “yes” to this question. **Page 110**

Market abuse

- 40. Are there any market abuses that you consider need to be addressed in particular with regard to screen-based trading systems? If so, please describe.**

Singapore identified a unique abuse related to user identification. Hong Kong reported unique security concerns but agreed that abuses in general are similar to other forms of trading. The UK noted that screen-based systems may be more open to wash trades and attempts to manipulate the closing price.

The remaining jurisdictions reported no abuses particular to electronic trading. **Page 112**

Trading linkages

- 41.**
- a) Describe your approach to the examination, review or approval of linkages between screen-based trading systems.**
 - b) How do you approach linkages where products of multiple electronic systems are traded on one dedicated system?**
 - c) How do you approach linkages where products of multiple electronic systems can be accessed through multiple applications operating on a personal computer.**
 - d) Do you permit self-regulatory responsibilities to be delegated or contracted to other exchanges or regulatory authorities?**

(a) Those jurisdictions which had experience with trading linkages report that they basically review the arrangement for market and customer protection purposes.

(b) and (c) : No unique requirements were described; such arrangements would be reviewed on a case-by-case basis under existing review procedures.

(d) France and the US (SEC and CFTC) permit such delegation of self-regulatory responsibilities by SROs. **Page 113**

Foreign exchanges

42. Do different regulatory procedures or requirements apply to foreign electronic trading systems seeking to provide persons/firms in your country with access to its trading system via membership or other form of participation? If so:
- a) Please describe the factors that cause you to determine that a system is “foreign;” and
 - b) Please describe briefly the process for system approval or authorization (only if process is different than the review above.)

All jurisdictions require the explicit recognition of foreign systems, either through formal exchange authorization procedures, reciprocal recognition arrangements (EU countries), or through a review and recognition process addressing specifically foreign systems (e.g. staff procedures at CFTC).

Those jurisdictions which responded to (b) essentially characterize a non-domestic server as a “foreign” system.

Regarding process, all jurisdictions require the submission of regulatory data.

Page 117

43. If different procedures/requirements exist, describe the specific topics that are examined when reviewing the authorization of foreign systems or foreign system access and explain the rationale for such different procedures or requirements.
- Note: Responses are needed only to the extent the process or the requirements for foreign systems are different than as described in questions 11-41 above. If any such responses are different for foreign systems, please identify the question number and explain the difference in your response to question #43. Please state expressly if the requirements are the same.**

No unique requirements were reported. The review/authorization inquiry appears to track generally the inquiry used by respondents in examining domestic systems.

Hong Kong makes clear that there are no approval requirements on the system itself (as is likely the case in other jurisdictions).

Page 120

44. **Do you have any requirements concerning foreign electronic trading systems providing remote membership/ participation to regulated firms in your jurisdiction or firms accessing such foreign systems from your jurisdiction? Please describe.**

The majority of jurisdictions require some form of authorization for remote membership which some respondents characterized as operating a market in their jurisdiction (*see* Australia and Canada).

Canada explicitly would prohibit a registered firm from operating as a remote member; such conduct would require authorization as an exchange or an exemption from recognition as an exchange. Compare the Netherlands which permits the firm to apply for broker-dealer status. **Page 122**

45. **Do you have any requirements concerning foreign electronic trading systems providing remote membership/ participation to unregulated entities/persons in your jurisdiction? Please describe.**

There do not appear to be requirements unique to the provision of remote membership to unregulated entities or firms. The provision of remote membership/participation to a registered or unregistered firm would require authorization as described in 42-44 above. **Page 124**

Cross-order coordination

46. **Please describe what arrangements you have implemented to supervise cross-border systems (e.g., information-sharing lead-regulator or other arrangements for allocating regulatory and/or self-regulatory oversight. Do you divide specific supervisory responsibilities between jurisdictions where the participants are located and where the system is deemed to be located?**

General regulatory cooperation and information sharing are addressed by memoranda of understanding (MOUs). The following jurisdictions reported allocation of responsibility arrangements: France, Germany, Italy, the Netherlands, and the United States CFTC. *See also* Spain and Malaysia which consider the foreign exchange as having the primary responsibility for supervising its operations.

Page 126

IOSCO Principles

- | | |
|--|-----------------|
| <p>47. Please identify any areas where you consider that the existing IOSCO principles could usefully be amended, added to or expanded. If any issues are identified, please note how you would modify the 1990 Principles to address that issue in the space provided in the cell to the right of the Principle copied below.</p> | <p>Page 128</p> |
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Principle 1. [Applicable Regulatory Standards]

The system sponsor should be able to demonstrate to the relevant regulatory authorities that the system meets and continues to meet applicable legal standards, regulatory policies, and/or market custom or practice where relevant.

Principle 2. [Transparency]

The system should be designed to ensure the equitable availability of accurate and timely trade and quotation information to all system participants and the system sponsor should be able to describe to the relevant regulatory authorities the processing, prioritisation, and display of quotation within the system.

CANADA-ONTARIO

Currently, there are some non-disclosure systems (e.g., OptiMark). *In the proposed regulatory framework for ATs, we are proposing not to require non-disclosure systems to disclose quote information to the data consolidator.*

CANADA-QUEBEC

Currently, the Securities Act requires that constituting by-laws and operating rules of an organization provided for equal access to services for every member.

In the proposed regulatory framework for ATs, we are proposing not to require non-disclosure systems to disclose quote information to the data consolidator.

Principle 3. [Order Execution Algorithm]

The system sponsor should be able to describe to the relevant regulatory authorities the order execution algorithm used by the system, i.e., the set of rules governing the processing, including prioritisation, and execution of orders.

AUSTRALIA

While this principle remains appropriate, it should commence with similar words to Principle 2. The operator should be under an obligation to actually explain to the regulator, rather than merely being in a position to explain.

Principle 4. [Operational Issues]

From a technical perspective, the system should be designed to operate in a manner which is equitable to all market participants and any differences in treatment among classes of participants should be identified and explained.

AUSTRALIA

While this principle remains appropriate the operator should be under an obligation to demonstrate to the regulator that the system is equitable.

HONG KONG

These differences should also be transparent to all market participants.

Principle 5. [System Vulnerability]

Before implementation, and on a periodic basis thereafter, the system and system interfaces should be subject to an objective risk assessment to identify vulnerabilities (e.g., the risk of unauthorised access, internal failures, human errors, attacks, capacity and natural catastrophes) which may exist in the system design, development, or implementation.

AUSTRALIA

While this principle remains appropriate and effective, it should require the operator to provide a report to the regulator on the objective assessment. The assessment should be by, or be reviewed by, an independent, expert body.

CANADA – ONTARIO and QUEBEC:

In the proposed regulatory framework for ATs, we are proposing that system vulnerability should only be reviewed once an ATS reaches 20% of the trading in a class of securities. In Ontario, for exchanges, there is no threshold percentage that must be reached. Systems capacity requirements will apply to all exchanges.

Principle 6. [Standards of System Access]

Procedures should be established to ensure the competence, integrity, and authority of system users, to ensure that system users are adequately supervised, and that access to the system is not arbitrarily or discriminatorily denied.

HONG KONG

The system sponsor should also have (or have ready access to) adequate appropriately qualified staff to maintain, upgrade and modify any necessary part of the system.

Principle 7. [Financial Integrity]

The relevant regulatory authorities and the system sponsor should consider any additional risk management exposures pertinent to the system, including those arising out from interaction with related financial systems.

HONG KONG

This analysis should also note the impacts that any failure in the host system would have on related entities.

Principle 8. [Surveillance]

Mechanisms should be in place to ensure that the information necessary to conduct adequate surveillance of the system for supervisory and enforcement purposes is available to the system sponsor and the relevant regulatory authorities on a timely basis.

Principle 9. [Relevant Disclosures]

The relevant regulatory authorities and/or the system sponsor should ensure that system users and system customers are adequately informed of the significant risks particular to trading through the system. The liability of the system sponsor, and/or the system providers to system users and system customers should be described, especially any agreements that seek to vary the allocation of losses that otherwise would result by operation of law.

Principle 10. [Allocation of Supervisory Responsibility]

Procedures should be developed to ensure that the system sponsor, system providers, and system users are aware of and will be responsive to the directives and concerns of relevant regulatory authorities.

OTHER ISSUES

Please use the space provided below to discuss any other issues or concerns that do not explicitly fit under the existing Principles.

FRANCE

It would be useful to add a Principle related to order routing systems.

GERMANY

The IOSCO Principles mentioned above should also apply in case of cross-border co-operation of exchanges.

- Appropriate supervision of the home country authorities should be sufficient. Additional supervision by the host country authorities should be avoided. In effect, that implies that there should not be an additional admission of the exchange and its products by the host country authorities.

ITALY

The trading system should provide trading data to the clearing house on a real-time basis, so that the clearing house can monitor continuously its member's exposure and be able to promptly call for intra day margins when needed .

SURVEY PARTICIPANTS

Members of Working Party on Secondary Markets

Australia

Australian Securities and Investments Commission (ASIC)

Canada

Ontario Securities Commission (OSCO)

Commission des valeurs mobilières du Québec (CVMQ)

France

Commission des Opérations de Bourse (COB)

Germany

Bundesaufsichtsamt für den Wertpapierhandel (BAWe)

Hong Kong

Securities and Futures Commission (SFC)

Italy

Commissione Nazionale per le Società e la Borsa (CONSOB)

Japan

Ministry of Finance (MOF)

The Netherlands

Securities Board of the Netherlands (STE)

Spain

Comisión Nacional del Mercado de Valores (CNMV)

United Kingdom

Financial Services Authority (FSA)

United States

Securities and Exchange Commission (SEC)

Commodity Futures Trading Commission (CFTC)

Other Participants²⁴

Argentina

Comisión Nacional de Valores (CNV)

²⁴ Brazil and Malaysia participate as observers in TCWG-2. Regulators from Argentina, Japan (MITI and MAFF) and Singapore participated in the survey following a general request for such additional participants made during the international regulators meeting in Boca Raton, Florida.

Brazil

Comissao de Valores Mobiliarios (CVM)

Japan

Ministry of International Trade and Industry (MITI)

Ministry of Agriculture, Forestry and Fisheries (MAFF)

Malaysia

Securities Commission (SC)

Singapore

Monetary Authority of Singapore (MAS)

Explicit requirements ²⁵

1. Does your jurisdiction have any laws, rules or regulations relating specifically to electronic screen-based trading? If so, please identify the legislation and outline the main points.

The majority of jurisdictions reported no published laws or regulations explicitly relating to electronic trading.

Germany, Spain, Singapore and the US SEC reported laws or regulations specifically addressing electronic systems.

AUSTRALIA

No. However, the ASX has business rules which regulate Automated Client Order Processing systems which some members may provide to their clients, and which give access to the exchange's market through an open interface connection between the market and the member's proprietary trading system. The SFE is proposing an automated order routing system in the near future. In general, the Australian Government has attempted to ensure that as much of its legislation as possible is not technology specific, and is technologically neutral.

CANADA-ONTARIO

There are no rules or regulations relating specifically to electronic trading systems. OSC Staff distinguished between operating a system in our jurisdiction versus access to a system in another jurisdiction.

System Operation- With respect to operation of a system in general, section 21(1) of the *Securities Act* (Ontario) (the "Securities Act") prohibits any person or company from carrying on business as a stock exchange in Ontario unless recognized by the Commission. The Commission has the power to make any decision, if it is in the public interest, regarding the manner in which a recognized stock exchange carries on business, the trading of securities on or through the facilities of that exchange, any security listed or posted for trading on that exchange, issuers whose securities are listed or posted, to ensure they comply with Ontario securities laws, and any rule, by-law, policy, procedure, interpretation or practice of recognized stock exchange.

Under section 19 of the *Commodity Futures Act* (Ontario), no person or company may carry on business as a commodity futures exchange in Ontario unless registered by the Commission. The Commission has no authority under the CFA to exempt an exchange from this requirement. Section 20 requires that all registered commodity futures exchanges are required to file all by-laws, rules, regulations and policies with the Commission. The Commission has the power to make any decision with respect to the manner in which the exchange or its clearing house carries on business, with respect to any by-law, rule or

²⁵ Unless otherwise specified, please answer the following questions from the perspective of a domestic regulator of a domestic screen-based trading system that (a) concludes or executes a legally-binding transaction, (b) is non-proprietary (*i.e.*, not operated by an individual intermediary) and (c) trades derivative products. Issues concerning foreign-based systems and access to such systems are addressed in a separate set of questions below. Issues regarding proprietary screen systems are beyond the scope of this survey.

regulation of such exchange or its clearing house or with respect to trading on or through the facilities of any exchange or with respect to any contract traded on the exchange, including the setting of margins, daily price limits, daily trading limits and position limits.

Under a Memorandum of Understanding between the Commission and the stock or commodity futures exchange, a protocol is set out with respect to the filing by the exchange and the review and approval of the Commission of by-laws, rules, regulations, policy statements and amendments thereto. The protocol sets out timing and the specific factors considered in the review.

System Access- With respect to the trading of securities on an electronic trading system, there are no rules specifically relating to electronic trading systems. In general, the *Securities Act* provides that no person or company shall trade in a security or act in furtherance of a trade unless the person or company is registered in Ontario.

CANADA-QUEBEC

There are no rules or regulations relating specifically to electronic trading systems. CVMQ Staff distinguished between operating a system in our jurisdiction versus access to a system in another jurisdiction.

System Operation- To carry on business in Québec, a stock exchange or a securities clearing-house must be recognized by the CVMQ as a self-regulatory organization. In no case may a professional association regulate transactions in securities by its members unless it is recognized by the CVMQ as a self-regulatory organization.

System Access- With respect to the trading of securities on an electronic trading system, there are no rules specifically relating to electronic trading systems. In general, the *Securities Act* provides that no person or company shall trade or advise in security unless the person or company is registered in Québec.

FRANCE

There are no laws or rules specifically addressing electronic systems as such. However, the rules of electronic futures markets (MATIF and MONEP) include provisions relating to electronic trading.

GERMANY

The German Exchange Act specifically addresses electronic screen-based trading of derivatives. These provisions permit the use of solely screen-based electronic trading systems for exchange trading and require that the Exchange Regulations contain more detailed rules, specifically on the price discovery process. The Exchange Rules have to be approved by the respective State Exchange Supervisory Authority.

HONG KONG

There are no laws, rules or regulations relating specifically to electronic screen-based trading. Legislation that will address this area is currently being drafted.

Currently, regulation of screen-based trading for the Stock Exchange of Hong Kong (SEHK) by the Securities and Futures Commission (SFC or Commission) occurs under s.3. (3)(a)(ii) of the Stock Exchange Unification Ordinance (SEUO). This subsection requires the:

“provision and maintenance, to the satisfaction of the Commission, of adequate and properly equipped premises for the conduct of the business of a stock market”

Regulation of screen-based trading for the Hong Kong Futures Exchange (HKFE) by the SFC is covered by s3(b) (i) of the Commodities Trading Ordinance (CTO). This subsection states that the commodity exchange will: *“maintain to the satisfaction of the Commission an adequate and properly equipped place of business”*

ITALY

There are no laws or rules relating specifically to electronic systems.

Any trading of financial instruments, included derivatives, requires the exchange to be authorized under the Legislative decree 58/98 (Testo Unico); for this reason market rules are required to be reviewed and expressly approved by CONSOB, including rules implementing screen-based trading systems.

Under this approach, the CONSOB examines the exchange rules establishing the specific electronic system and all the related operational, market design, financial integrity and customer protection rules for compliance with all relevant provisions of Testo Unico.

In this one and the following answers, we do not consider the Italian regulation on “organized markets other than regulated markets ” (art. 78 of Testo Unico) which allows different entities to manage even screen-based trading system less regulated than an official exchange but still under the supervision of Consob.

JAPAN - MOF

No. There are no laws or rules specifically addressing electronic systems. Relevant provisions are included in the Securities and Exchange Law (SEL) and the Financial Futures Trading Law (FFTL).

NETHERLANDS

There are no laws or rules specifically addressing electronic systems as such. AEX is a recognised exchange under the Act on the Supervision of Securities Trade 1995 (Wte 1995). Changes in rules and regulation of the exchange have to be approved of by the securities board of the Netherlands (STE). As such the STE has to approve of rules regarding screen based trading.

SPAIN

Neither Ley del Mercado de Valores (Spanish Securities Market Act, 24/1988 -on July 28th 1988- Amended by Act 37/1998 -on November 16th 1998), nor Real Decreto (Royal Decree 1814/91-on December, 20th 1991), which regulates the Spanish Futures & Options markets, include any reference to electronic markets. From the moment the markets were approved, electronic screen-based was the model adopted for trading. The market rules include financial integrity and customer protection rules.

UNITED KINGDOM

There are no laws addressing screen-based trading specifically. Recognised Investment Exchanges (“RIE’s”) must comply, on an ongoing basis, with the recognition requirements set out in Schedule 4 to the Financial Services Act, irrespective of the method of trading they adopt.

UNITED STATES –CFTC

There are no laws or rules specifically addressing electronic systems as such. Systems currently are addressed under Commodity Exchange Act (CEA) and CFTC rules of general application. Section 4 of the CEA requires that all futures and certain commodity option contracts traded in the US must be effected on boards of trade that have been designated as “contract markets” unless explicitly exempted by the CFTC. Thus, any trading of futures, whether by open outcry or by electronic systems, would require the “board of trade” to be designated as a contract market under section 5a(a)(12)(A) of the CEA [see question 9 for standards]. Contract market rules similarly are required to be reviewed and/or expressly approved by the CFTC. Thus, any rules submitted by a contract market implementing screen trading systems would be reviewed and approved by the CFTC under this section and CFTC rule 1.41. Under this approach, the CFTC examines the exchange rules establishing the specific electronic system and all

related operational, market design, financial integrity and customer protection rules for compliance with all relevant CEA provisions and CFTC rules, taking into account the unique aspects of screen systems as compared to open outcry trading.

UNITED STATES - SEC

Yes. The Securities and Exchange Commission (“Commission” or “SEC”) recently adopted a new regulatory framework applicable to exchanges and alternative trading systems, effective April 21, 1999. If an electronic screen based trading system falls within the definition of “exchange” under Securities Exchange Act of 1934 (“Exchange Act”) Rule 3b-16, that system must either register with the Commission as a broker-dealer and comply with Regulation ATS, register as an exchange, or apply for an exemption from exchange registration based upon limited volume. See Securities Exchange Act Release No. 40760 (Dec. 8, 1998), 63 FR 70844 (Dec. 22, 1998) (“Exchange Release”).

ARGENTINA

At the moment there are no laws, rules or regulations specifically addressing electronic screen-based trading systems.

As a general principle, according to Section 80 and 83 of Decree #2284/91 as ratified by Section 29 of Law 24.307, every person or entity involved in “public offering” of futures and options contracts in Argentine jurisdiction, either by open outcry or by electronic screen-based trading, must be previously approved by the National Securities Commission (Comisión Nacional de Valores, CNV).

Thus, any rules submitted by this persons or entities regarding the implementation of screen trading systems would be reviewed and approved by the CNV.

Under this approach, the CNV examines rules establishing the specific electronic system and all related operational, market design, financial integrity and customer protection rules for compliance with all relevant CNV regulations, taking into account the unique aspects of screen systems as compared to open outcry trading.

BRAZIL

There are no specific laws or regulations on screen-based derivatives trading.

Screen-based derivatives trading is included in the regulation on general derivatives trading. In July 1993 CVM published Rule N° 283, that replaces 22 regulatory instruments regarding equity derivatives. It establishes clearer procedures and responsibilities regarding risk management, emergency procedures, record keeping, information sharing, collateral monitoring and contract design for derivatives trading both by outcry or by electronic systems. Rule N ° 283 also enlarged the powers and responsibilities of the SROs in the regulation of the derivatives market.

Only in 1998 electronic dealers systems were allowed to operate derivatives contracts. Prior to that CVM would not allow these systems to deal with derivatives contracts. It was made possible under Rule N° 243 and it demands CVM’s approval on new contracts.

JAPAN – MITI/MAFF

No. There are no laws and rules specifically addressing electronic screen-based trading. However, relevant provisions are included in the Commodity Exchange Law(CEL), Exchange rules and its regulations.

MALAYSIA

There is no legislation specific to screen-based trading. However, the definition of “futures market” in the Futures Industry Act 1993 is wide enough to encapsulate screen-based trading, and intermediaries are accordingly subject to authorisation and regulation under the Act.

SINGAPORE

There are a number of provisions that specifically address electronic trading systems. Under section 2 of the Futures Trading Act (FTA), an electronic system which provides price information and permits users of the facility to channel orders for, execute transactions in, or make a market in, futures contracts will be considered a 'futures market'. A person establishing or maintaining such a futures market in Singapore has to be approved as a Futures Exchange by the Monetary Authority of Singapore (MAS) under section 4 FTA. Amendments and additions to the rules of the exchange, including those relating to electronic screen-based trading, must be reviewed by the MAS under section 6 FTA. In addition, under section 5 FTA, a Futures Exchange shall not operate any electronic facility for the trading of any futures contract without seeking the approval of the MAS. Chapter 11 of the Rules of the Singapore International Monetary Exchange Ltd (SIMEX) also prescribes rules for electronic trading systems in Singapore.

2. As market supervisor/authority, do you have any published regulations/performance criteria/guidance relating specifically to screen-based trading systems? If so, please outline (briefly) the main points.

The majority of jurisdictions do not have such explicit published rules or guidance.

But see # 3: all jurisdictions either have adopted or follow the IOSCO Principles.

France, the Netherlands and the US CFTC reported explicit guidance.

AUSTRALIA

No

CANADA – ONTARIO

No. The IOSCO Principles for the Oversight of Screen-Based Trading Systems provide guidance. The Ontario Securities Commission, together with the other securities commissions in Canada, is currently developing a proposal to regulate alternative trading systems (ATs) in Canada. It is anticipated that the proposal will be published for comment in June 1999. Until the proposed regulatory framework is made public, we would like to maintain confidentiality. As a result, we have used italics to indicate where specific information is contained in the proposed regulatory framework and therefore should not be discussed.

CANADA-QUEBEC

No. The IOSCO Principles for the Oversight of Screen-Based Trading Systems provide guidance. The CVMQ, together with the other securities commissions in Canada, is currently developing a proposal to regulate alternative trading systems («ATs») in Canada. It is anticipated that the proposal will be published for comment in June 1999. Until the proposed regulatory framework is made public, we would like to maintain confidentiality. As a result, we have used italics to indicate where specific information is contained in the proposed regulatory framework and therefore should not be discussed.

FRANCE

Yes. The 1990 IOSCO Principles for the oversight of screen based trading systems

In addition in 1994, the Commission issued a list of principles related to electronic order routing systems. These principles apply :

- to the end user or the order routing system (the client using such an order routing system must commit itself to grant access to the systems only to authorized persons whose identity have been disclosed to the trading member, the

client must acknowledge that he/she is aware of the rules and codes of conduct of the market on which he/she wants to place orders ; in order to prevent order routing terminals from being disseminated anywhere, an agreement must be signed between the client and the trading member whereby the client acknowledges that the market operator may conduct on site equipment inspections and agrees not to disseminate the market information displayed on the system and not to provide electronic access to the system to third parties.

- To the trading member (the trading member must provide a complete set of documentation on the order routing system to the market authorities ; in case of disruption of the order routing system, an alternative means of receiving the client's order must be available ; the trading member must keep a record (audit trail) of the orders and transactions generated by the order routing system and make available immediately upon request to the regulator such information in case of a possible violation of securities laws and regulation.

To the order routing system itself (the system must permit the identification of each operator using the system : the response time of the system must be identical for all the end users, the safety of the system must be ensured by encryption of the messages ; the system must reject the orders the parameters of which would be technically incorrect, which would exceed the trading limits set up by the intermediary for each user of an order routing system according to its solvency, the size, price or sequence of which would threaten the integrity of the market. Large size orders and orders with a price substantially different from the market price may not be sent to the market without prior confirmation by the client.

GERMANY

Neither the Bundesaufsichtsamt für den Wertpapierhandel nor the respective State Exchange Supervisory Authority has published legal texts relating specifically to screen-based electronic trading systems. However, the Exchange Regulations require approval by the State Exchange Supervisory Authority.

HONG KONG

(a) Yes

(b) The 1990 IOSCO Principles for the Oversight of Screen-Based Trading Systems and also the Report Of The Securities and Futures Commission Working Group On Automated Trading Systems – Public Consultation (Feb. 97). The latter report addressed the following main principles:

- Fitness and properness of the ATS operator and co-operation with regulatory authorities.
- Maintenance of audit trails and transparency of trading and system operations.
- The performance of surveillance, regulatory functions and maintenance of security and control procedures and back-up arrangements.
- Risk management policies and financial standing of the ATS operator being consistent with accepted international practice.

The Internet Guidance issued by the SFC in March provides certain Guidance to brokers using screen-based trading systems to conduct their business.

ITALY

No.

JAPAN – MOF

No, see answer to 1.

THE NETHERLANDS

Yes. The 1990 IOSCO Principles for the Oversight of Screen-Based Trading Systems (IOSCO Principles) (see question 3 below)

SPAIN

No.

UNITED KINGDOM

The Financial Services Authority has issued no specific guidance in respect of screen-based trading systems beyond the endorsement (in 1991) by its predecessor body – the Securities and Investments Board (SIB) – of the IOSCO ‘Principles for the Oversight of Screen-based Trading’.

UNITED STATES – CFTC

Yes. The 1990 IOSCO Principles for the Oversight of Screen-Based Trading Systems (IOSCO Principles) (see question 3 below). Also, the staff memoranda recommending CFTC approval of rules implementing electronic systems reflect the factors considered by the CFTC in approving systems.

UNITED STATES – SEC

The rules and regulations under the Exchange Act apply to exchanges whether their systems are screen based or not.

ARGENTINA

At the moment, there are no published regulations or performance criteria, or guidance relating specifically to screen-based trading systems.

BRAZIL

No, there is no specific rule on the subject. Screen-based trading systems are regulated following the same principles as the outcry system of the exchanges. CVM published Rule N° 243 on March 1st, 1996 regulating organized dealer markets. These markets must follow several rules applied to exchanges described in the 17th article of Rule N° 243.

JAPAN – MITI/MAFF

No, see answer to item #1.

MALAYSIA

There are no specific regulations published in respect of screen-based trading systems.

SINGAPORE

Under section 70 of the FTA, the MAS may make regulations for the carrying out of the purposes and provisions of the Act, including providing for the establishment and regulation of any electronic system by a Futures Exchange, whether by itself or in conjunction with other futures exchanges. No such regulations are presently in force

3. Have you adopted the 1990 IOSCO Principles for the Oversight of Screen-Based Trading Systems? If so, please describe generally how each of the 1990 Principles has been applied to your supervisory/review process?

The majority of jurisdictions report adoption of the IOSCO principles.

Even where not explicitly adopted, the 1990 principles are taken into account.

AUSTRALIA

ASIC has generally adopted the IOSCO 1990 Principles in its supervision of Australian screen based trading systems.

CANADA – ONTARIO

The Principles have been taken into account in considering specific applications and in developing the proposed framework for ATSS.

CANADA-QUEBEC

The Principles have been taken into account in considering specific applications and in developing the proposed framework for ATSS.

FRANCE

Yes. The 1990 IOSCO Principles for the oversight of Screen Based Trading Systems are taken into account when granting the registration as a regulated market to an electronic screen based trading market.

GERMANY

Yes. The rules and regulations for screen-based derivatives exchanges were adopted before the publication of the IOSCO principles. However, they already reflected those principles.

HONG KONG

(a) Yes

(b) In general:

- (i) The principles formed the basis of the Report Of The Securities and Futures Commission Working Group On Automated Trading Systems – Public Consultation (Feb. 97).
- (ii) The Internet Guidance as above.
- (iii) The 1990 Principles will be applied in legislation currently being drafted. This legislation is expected to address the ‘proper systems’ question in a more flexible manner than that currently employed. The intention is to avoid specific details, in favour of a wider legal approach, more amenable to the increasingly diverse technical questions including systems’ adequacy, technical support and back-up facilities. Legislation may then be applied more readily to the supervisory/review process.

Any exchange system inspections will incorporate the 1990 Principles.

ITALY

Yes. The 1990 IOSCO Principles are taken into account when authorizing regulated markets.

JAPAN – MOF

Yes. Essentially, supervision and reviews of the Ministry of Finance (MOF) of screen systems incorporate each of the 1990 IOSCO Principles which are applied flexibly and pragmatically.

THE NETHERLANDS

N/A

SPAIN

Yes. Actually IOSCO Principles are taken into account.

UNITED KINGDOM

The Principles were endorsed by the SIB in 1991 (see answer 2). The FSA is required under the FS Act to recognise new exchanges, and (implicitly) to supervise existing ones so as to ensure that they comply with the recognition criteria for exchanges. The FSA conducts this oversight taking into account any guidance it may have issued.

UNITED STATES – CFTC

Yes. The 1990 IOSCO Principles were adopted by the CFTC as an official statement of CFTC regulatory policy in 1990. See 55 Federal Register 48670 (November 21, 1990). Essentially, the CFTC’s

reviews of screen systems incorporate each of the 1990 principles which are applied flexibly and pragmatically.

UNITED STATES – SEC

The SEC’s administration of the U.S. federal securities laws is consistent with the 1990 IOSCO Principles. However, because the 1990 IOSCO Principles relate to non-proprietary screen based trading systems that trade derivative products, they have limited application to the markets regulated by the Commission.

ARGENTINA

CNV has not yet adopted 1990 IOSCO Principles for the Oversight of Screen-Based Trading Systems.

BRAZIL

Yes. CVM adopted the 1990 IOSCO Principles for the Oversight of Screen-Based Trading Systems as an official statement. Basically, CVM reviews these principles during the development of the regulatory framework, the authorization and monitoring of the screen-based systems.

JAPAN - MITI/MAFF

Yes. Essentially supervision and reviews of the MAFF or MITI of screen systems incorporate each of the 1990 IOSCO principles which are applied flexibly and pragmatically.

MALAYSIA

No.

SINGAPORE

Yes. MAS is monitoring international best practices in this area, and the IOSCO Principles are at the forefront of our policy reviews.

Market Organization

4. Do you or any other authority have rules that require or prohibit a particular form of organization for electronic markets (*e.g.*, membership or publicly held)? If so, please explain. If shareholder organization is permitted, please note who may purchase shares.

The majority of jurisdictions do not require a particular form of organization for electronic markets.

Germany and Japan require exchanges to be membership organizations; Spain requires exchanges to be incorporated societies; Brazil requires that exchanges must be nonprofit civil associations and Malaysia permits only companies to maintain and operate markets (although there is no limitation on whether it is membership or publicly held). Under current Hong Kong legislation, the Stock Exchange of Hong Kong has the monopoly status to operate a stock market in Hong Kong.

AUSTRALIA

No

CANADA – ONTARIO

There are no rules that require or prohibit a particular form of organization for electronic markets.

Some limitations have been placed on foreign systems operating in Ontario. For example, Instinet U.S. and Bloomberg Tradebook have been granted registration in Ontario as international dealers. As international dealers, they are limited to dealing with □ designated institutions □ (a term defined in the Regulation to the Securities Act) and to secondary market transactions or private placements for equity. They have also been restricted to providing trade execution facilities for foreign non-interlisted securities. They were restricted to providing trade execution facilities for foreign non-interlisted securities in order to minimize the fragmentation until the issues regarding ATSS were dealt with on a broad policy basis.

CANADA-QUEBEC

There are no rules that require or prohibit a particular form of organization for electronic markets.

FRANCE

No

GERMANY

Under the Exchange Act, exchanges are statutory bodies without legal capacity (nicht rechtsfähige Anstalt des öffentlichen Rechts). Such bodies act through holding and operating companies (Trägersgesellschaft) which may be organised as private or public law entities. For example, Eurex Deutschland as an exchange is held and operated by Eurex Frankfurt AG.

HONG KONG

(a) Yes

(b) The current legislation of Hong Kong was written in the 70's, when the development of electronic trading was not envisaged. The relevant section of the Securities Ordinance and the Commodities Trading Ordinance define stock/commodity market as a "place." Whether this "place" could also be referred to as a virtual place or cyber space, it would be subject to legal interpretation.

However, s20 of the Securities Ordinance has preserved the monopoly status of the Stock Exchange of Hong Kong for operating a stock market in Hong Kong. The offices or facilities of licensed securities dealers, which are Stock Exchange members, or recognized clearing houses are excluded from the definition of stock market. Therefore, theoretically, Stock Exchange members are not prohibited from providing a trading platform for the execution of their client orders. Other licensed securities dealers, who are not Stock Exchange members, are not prohibited from operating trading facilities provided that they do not violate the s20 of the Securities Ordinance. There are brokers in Hong Kong providing order routing facilities to deliver client orders to Stock Exchange members for trade execution.

The Commodities Trading Ordinance does not provide any monopoly status for the Hong Kong Futures Exchange. The Governor in Council is empowered by the law to issue a license to an applicant to establish and operate a commodity exchange.

Legislation currently being drafted may expand Hong Kong's regulation to cover the provision of electronic trading facilities.

(c) Anybody may purchase shares through a dealer.

ITALY

No. Electronic markets must be operated only by an authorized exchange, which must be an incorporated company. Everyone can become shareholder of a regulated market management company. The identity of the shareholder must be disclosed to CONSOB within 24 hours from the purchase of the stake.

JAPAN – MOF

Yes. The SEL and the FFTL exclusively permit an exchange to open a derivatives market (a securities-related derivatives market; a securities exchange, a financial derivatives market; a financial futures exchange), whether the market is electronic or non-electronic, and both of the laws require an exchange to be a membership organization.

THE NETHERLANDS

No. The STE does not require a specific form of organization for either electronic or non-electronic markets. But the STE ensures that the method of trading and market organization, customer protection and market integrity are in compliance with the Act on the Supervision of Securities Trade 1995 (Wte 1995).

SPAIN

Under the Royal Decree 1814/91 (which regulates Spanish derivatives exchange) and the Securities Market Act, the Market must be governed by a Government Body (Exchange- Sociedad Rectora), which must be an Incorporated Society, With a minimum share capital of 9 million euros.

Members of the market could become shareholders. Non- members need previous approval from CNMV. In order to allow new shareholders, Exchanges have to increase share capital.

Under the exchanges' Rules and Regulations, members must be a Securities Company or Securities Agency, Bank or Saving Bank or any of the other classes of organization indicated in parts a, b, and c of article 76 of the Securities Markets Act. However this restriction does not depend on whether the trading is screen based or open outcry

UNITD KINGDOM

Neither UK law, nor the FSA, currently prescribe any particular form of organisation or ownership of exchanges. At present, the UK has 3 mutually owned derivative exchanges and one which is a subsidiary of a foreign public company. Two of the three mutual exchanges have announced that they are planning to alter their present structures.

UNITED STATES – CFTC

No. The CEA does not require a specific form of organization for either electronic or non-electronic markets. Rather, the overriding focus of the CEA and CFTC rules is to ensure that the method of trading and market organization support “open and competitive trading,” customer protection and market integrity.

UNITED STATES – SEC

National securities exchanges may be organized as either membership organizations or proprietary organizations. Currently, all national securities exchanges are membership organizations. The Commission recently issued an order for a limited volume exemption for Tradepoint Financial Networks, plc (“Tradepoint”) a proprietary exchange organized under the laws of the United Kingdom. See Securities Exchange Act Release No. 41199 (March 22, 1999), 64 FR 14953 (March 29, 1999).

ARGENTINA

There are no rules that require or prohibit a particular form of organization specifically for electronic markets. As a general rule, CNV General Resolution # 194/92 requires entities, asking for authorization to act as futures markets in

Argentina, to be formed as a stock corporation. This requirement apply for either electronic or non electronic markets.

Futures Markets' shares can be purchase by any person or entity. Futures Markets' rules may establish special procedures and limitations regarding the number of shares any person or entity can hold.

BRAZIL

Yes. National Monetary Council (NMC) Resolution N° 1.656 published by the requires that Exchanges must be nonprofit civil associations and have appropriate systems (either outcry or electronic) to assure markets transparency, fairness, efficiency and safety. Only broker firms are allowed to be members and the NMC determines membership limits. CVM is responsible for the approval of new members through share acquisitions. Besides, electronic dealers systems and exchanges must ask for CVM's authorization prior to operation, and all the information on the structure of the systems is analyzed in order to allow trading to occur.

JAPAN – MITI/MAFF

Yes. CEL exclusively permit an exchange to open a commodity-related derivatives market, whether the market is electronic or non-electronic. CEL requires an exchange to be a membership organization.

MALAYSIA

The Futures Industry Act 1993 permits only companies to maintain and operate futures markets generally. There is however no limitation as to whether it is membership held or publicly held. The persons who may purchase these shares may be subject to ministerial approval and their constitutive documents.

SINGAPORE

No.

5. Does your approach to the regulation of screen-based trading systems differ depending upon the form of organization (e.g., member vs. shareholder or for profit vs. non-profit)? If so, please explain generally the differences in approach and the criteria for drawing these regulatory distinctions.

None of the jurisdictions vary their approaches to the regulation of screen-based systems based on differing forms of organization. But see Hong Kong.

Several jurisdictions note that to date they have only been presented with systems operated by organized exchanges.

AUSTRALIA

ASIC considers that the form of organisation which is operating a screen based trading system should not materially affect the regulatory objectives which are applied to supervising such trading systems.

CANADA – ONTARIO

Our approach to the regulation of screen-based trading systems differs depending on the functions performed by the trading system.

CANADA-QUEBEC

Our approach to the regulation of screen-based trading systems differs depending on the functions performed by the trading system.

FRANCE

No.

GERMANY

No. See question 4.

HONG KONG

- (a) This question may be approached in two ways. Initially;
- (i) *No*, the regulatory approach does not differ, as all organisations which meet the criteria of screen-based trading systems are subject the same regulatory requirements (i.e. order-routers and Deutsche Borse terminals do not complete the execution of the trade and are therefore not regarded as exchanges, per se, and as a result are not subject to the same regulatory requirements) however;
- (ii) *Yes*, the regulatory approach does differ, as under current legislation only recognised exchanges and their members may be regulated in the provision of screen-based trading systems.

ITALY

See answer n. 4.

JAPAN

No.

THE NETHERLANDS

No, screen based exchanges and regular exchanges have to comply with the same rules for recognition.

SPAIN

No. There is not differences in the regulatory approach depending on whether the trading system is electronic or not or the form of organization, because previous pit market never existed

UNITED KINGDOM

No. Our primary objective in respect of governance is to ensure that an exchange, whether or not electronic, is constructed and organised in a manner that enables the recognition criteria to be complied with. In particular, the FSA expects an exchange to organise its affairs so that any conflict between its commercial and regulatory objectives is managed in a way that upholds high regulatory standards (SIB Guidance Release 2/96: Standards of Regulation for Recognised Investment Exchanges).

UNITED STATES – CFTC

No. To date, all electronic system trading futures in the United States have been operated by boards of trade that have been designated as contract markets under the CEA. There are no “proprietary systems” (i.e., operated by an individual intermediary) for trading futures contracts in the U.S. “Proprietary” electronic “systems” or computer programs which automated certain order or trading functions (e.g., order routing, order management, floor execution systems) do exist.

UNITED STATES – SEC

The same regulatory structure would apply to both for-profit and not-for-profit trading systems. The Exchange Release describes different ways non-profit systems can satisfy regulatory requirements.

ARGENTINA

See answer above Number 4.

At the moment, the only electronic system trading futures contracts in Argentina is operated by a futures market previously authorized by the CNV. There are no proprietary systems (i.e., operated by an individual intermediary) for trading futures contracts in Argentina.

BRAZIL

No, to date all electronic systems in Brazil are operated by boards of trade.

JAPAN – MITI/MAFF

No.

MALAYSIA

No.

SINGAPORE

No

System authorization – responsibility and process

6. Do you impose any authorization, registration or licensing requirements on electronic markets? If so, please complete the questions below.

All jurisdictions impose authorization or licensing requirements on electronic markets.

AUSTRALIA

Australian legislation requires all markets to be approved as markets. Although there are different types of approval, the legislation does not differentiate between physical or electronic markets.

CANADA – ONTARIO

System Operation- In the proposed regulatory framework for ATSS, we are proposing that an ATS that operates in Ontario will have the following choices: (1) be recognized as an exchange; (2) be a member of an exchange (and subject to direct regulatory oversight by the exchange); (3) register as a dealer and be subject to additional requirements.

System Access- In order for a person or company to access an electronic market in Ontario, that person or company must be registered with the Commission as a dealer if the system merely routes orders to another market, but might be characterized as operating in our jurisdiction.

CANADA-QUEBEC

System Operation- In the proposed regulatory framework for ATSS, we are proposing that an ATS that operates in Québec will have the following choices: (1) be recognized as an exchange; (2) be a member

of an exchange (and subject to direct regulatory oversight by the exchange); (3) register as a dealer and be subject to additional requirements.

System Access- In order for a person or company to access an electronic market in Québec, that person or company must be registered with the CVMQ as a dealer if the system merely routes orders to another market, but might be characterized as operating in our jurisdiction.

FRANCE

Yes, see below.

GERMANY

Any exchange, including exchanges operating electronic markets requires approval of the respective State Exchange Supervisory Authority.

HONG KONG

Yes, as indicated above.

ITALY

See answer n. 4.

JAPAN - MOF

Yes, see below.

THE NETHERLANDS

Yes.

SPAIN

Every Exchange must pass the approval of the Ministry of Finance but no specific rules are applicable to electronic trading.

UNITED KINGDOM

All operators of trading systems must be recognised as an exchange or authorised as a broker-dealer or service company. There are no specific recognition requirements for electronic markets.

UNITED STATES – CFTC

Yes, see below.

UNITED STATES – SEC

Yes. See below.

ARGENTINA

Yes. See below.

BRAZIL

Yes.

JAPAN – MITI/MAFF

Yes, see below.

MALAYSIA

Authorisation is required for futures markets generally.

SINGAPORE

Yes. Please see response to questions 7, 8 and 9.

7. Please identify the market or other authority who reviews and/or approves the establishment or operation of screen-based trading systems in your jurisdiction (whether as a new system or a system offered by a previously authorized market). If different authorities have different roles, please explain.

See identification of regulatory authorities – securities/derivatives agency and/or Governmental Ministry.
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AUSTRALIA

The Minister (Treasurer) approves the establishment of markets in Australia. ASIC reviews the applications and advises the Minister on the suitability of the applicants and applications. ASIC will generally conduct significant discussions with an applicant preparing for a final application for the Minister. ASIC would liaise with the Reserve Bank of Australia on any application for a screen based trading system for money market instruments, such as Government bonds, which may have an impact on the domestic payment and settlement system.

CANADA – ONTARIO

An electronic trading system designed by an exchange or that chooses to be recognized as an exchange is required to submit all relevant rules, by-laws, policies and procedures to the Commission for review and approval.

In the proposed regulatory framework for ATSS, if an electronic trading system chooses to be regulated as a member of an exchange, the exchange would be responsible for direct regulatory oversight including review of the system. If an electronic trading system chooses to register as a dealer and be subject to additional requirements, we are proposing the following: an ATS be a member of an SRO (the SRO would be responsible for approving the dealer); an ATS file with the Commission an initial operation report at least 30 days before commencing operation as an ATS; an ATS comply with reporting and recordkeeping requirements

CANADA-QUEBEC

An electronic trading system designed by an exchange or that chooses to be recognized as an exchange is required to submit all relevant rules, by-laws, policies to the CVMQ for review and approval.

In the proposed regulatory framework for ATSS, if an electronic trading system chooses to be regulated as a member of an exchange, the exchange would be responsible for direct regulatory oversight including review of the system. If an electronic trading system chooses to register as a dealer and be subject to additional requirements, we are proposing the following: an ATS be a member of an SRO (the SRO would be responsible for approving the dealer); an ATS file with the CVMQ an initial operation report at least 30 days before commencing operation as an ATS; an ATS comply with reporting and recordkeeping requirements.

FRANCE

The recognition of a market as a regulated market is granted by the Minister of Finance on the proposal of the Conseil des Marchés Financiers (CMF) after approval by the CMF, inter alia, of the market rules and after the formal opinion of the COB and the Banque de France have been sought.

GERMANY

The exchange in the first place designs the systems and drafts related rules and regulations. They need approval of the respective State Exchange Supervisory Authority. IOSCO Principle No. 1 applies.

HONG KONG

It is the role of the SFC to review and approve the operation of any process or system involved with trading on a *previously authorised market* in Hong Kong. There are currently regulated three screen-based systems operating in Hong Kong which trade derivatives. These are the:

- 1) SEHK Automated Order Matching and Execution System (AMS) (*warrants*)
- 2) SEHK Traded Options System (TOPS) (*options*) and
- 3) HKFE Automated Trading System (ATS) (*currently futures only but options will migrate from open-outcry in the near future* ([tentative date – June])

The rules of both exchanges also require exchanges to keep systems up to date and efficient. Both exchanges are expected to supervise the activities of their members.

ITALY

Electronic trading system are designed by the exchange and related rules are submitted to Consob to be approved.

JAPAN – MOF

The exchange in the first instance designs the electronic trading system and drafts all related rules, which need to be approved by the MOF.

THE NETHERLANDS

Ministry of Finance (after consulting the STE).

SPAIN

Electronic trading system is designed by the Exchanges. The CNMV reviews the system and its rules that are part of the Market regulatory framework.

Frequently, exchanges upgrade their systems in order to improve their functionality and make easier trading for members.

UNITED KINGDOM

All applications for recognition as an exchange must be approved by the FSA.

UNITED STATES – CFTC

The exchange in the first instance designs the electronic trading system and drafts all related rules and in turn submits those rules to the CFTC for review.

UNITED STATES – SEC

The Commission is the ultimate regulatory authority for securities trading systems, including screen based systems. Trading systems that fall within the definition of “exchange” must apply to the Commission for registration as a national securities exchange (or for an exemption) and obtain approval

by the Commission prior to operating an exchange. If an existing exchange establishes a new screen-based trading system that constitutes part of the exchange facilities, the exchange must apply to the Commission for approval.

ARGENTINA

CNV reviews and approves the operation of screen-based trading systems in Argentina, either as a new system or as a system offered by a previously authorized market.

The market submit electronic trading systems related rules to the CNV for review and approval.

BRAZIL

Exchanges and organized dealers systems design the systems and submit them to CVM's approval.

JAPAN – MITI/MAFF

The exchange in the first instance designs the electronic trading system and drafts all related rules, which need to be approved by the MAFF or MITI .

MALAYSIA

The relevant authorities are the Securities Commission and Ministry of Finance. The Ministry of Finance issues the general authorisation for the establishment of a futures market, and the Securities Commission determines the suitability of the trading facilities.

SINGAPORE

MAS approves the operation of screen-based trading systems in Singapore. MAS consults SIMEX during the approval process on the design of such systems and the relevant rules governing these systems.

8. Describe generally the process for system review or authorization (e.g., filing requirements, documentation required, where system operator and sponsor are separate any separate approvals, time deadlines, notice and public comment requirements etc.). NOTE: Please distinguish review of system from review of products and address procedures for addressing revisions or modifications of rules.

Systems: All jurisdictions require submission of comprehensive information, typically all rules, by-laws and policies of the system, including contract terms and conditions.

Rule revisions: All jurisdictions require either preapproval of rule changes or a disallowance procedure.

AUSTRALIA

Authorisation

Approval of markets, electronic or physical, is by the Minister. Applications are made to ASIC, which provides advice to the Minister on the application. ASIC requires applicants to address the matters raised in section 1126 of the Corporations Law.

ASIC requires applications to include comprehensive documentation of all regulatory and operational aspects of any proposed market. ASIC will review those aspects which fall within its direct competence, but will require an applicant to provide independent expert review of other critical areas, e.g. an independent review of the computer systems, back-up, integrity etc.

Approval is unitary, but may be subject to conditions. If the system and operator were to be separate, it is likely that any approval would be given to the sponsor, on condition that the operational aspects of the system were adequate, and conditional on the operational aspects of the system not changing without the approval of the Minister.

There are no specified time lines for applications, or approval. Generally there is no public consultation process in considering applications for authorisation of markets, however, approvals are announced in the Government Gazette.

Modification of Rules

Any changes proposed by a market operator to its listing or business rules (including basic contract specification) may be disallowed, in whole or part by the Minister (s774 and s1136). The market operator must immediately provide the proposed rule changes to ASIC, with an explanation of the purpose of the amendment. ASIC advises the Minister on the proposed amendments, and the Minister may disallow them within 28 days. Generally market operators enter into informal discussions with ASIC prior to lodging formal notice of proposed rule changes.

There is no public comment provision.

CANADA – ONTARIO

System

An electronic trading system that chooses to be an exchange in Ontario must seek recognition under the *Securities Act*. A commodity futures exchange must seek registration under the CFA.

As part of the recognition under the *Securities Act*, the Commission will consider the following issues: capacity, competence, governance structure, access and whether any of the exchange policies, rules or by-laws are contrary to the public interest.

Under the CFA, the Commission shall grant registration to a commodity futures exchange where it is satisfied that to do so would not be prejudicial to the public interest and must take a number of factors into account (see below).

Both a stock exchange and commodity futures exchange, whether new or implementing an electronic system, must file all relevant rules, by-laws, policies and procedures. All by-laws are published in the Commission's weekly publication. By agreement (□MOU□), only by-laws, policies, rules, procedures, etc. that are identified as public interest require approval. The Commission reviews the filings to determine whether they are contrary to the public interest. Those by-laws, policies, rules etc that are identified as non-public interest are published and do not need formal approval. Amendments for rules, by-laws, policies, procedures are filed and may require approval, depending on the terms of the MOU.

In the proposed regulatory framework for ATSS, we are proposing that an ATS file certain documents including: an initial operation report, any amendments before implementing a change to its operations that is material, a quarterly statement of any changes, quarterly trading reports. This information is required more for information than approval. We are also proposing that ATSS make and keep the records necessary to create a meaningful audit trail. Specifically, ATSS are required to maintain daily summaries of trading and time-sequenced records of order information, including the date and time the order was received, the date, time and price at which the order was executed and the identity of the parties to the transaction. These recordkeeping requirements also require the ATS to keep records of all notices provided to subscribers, including notices addressing hours of operation, system malfunctions, changes to system procedures, and instructions pertaining to access to the ATS. In addition, ATSS are required to keep documents made (if any) in the course of complying with the systems capacity, integrity

and security standards. These documents include all reports to an ATS's senior management and records concerning current and future capacity estimates and the results of any stress tests conducted.

Products

Part IV of Rule 91-502 establishes a category of "recognized options" which is defined as: equity options or a non-equity option that is either traded on an exchange or market through a market clearing corporation that is not recognized at the time Rule 91-502 came into force, traded on an exchange or market through a recognized clearing corporation or recognized by section 4.2 under the Rule.

Section 4.2 states that a recognized market (stock exchange recognized under section 21) or recognized clearing corporation shall deliver to the Director the contract specifications for any option before the introduction of trading of that option begins. If the option is a non-equity accepted option, the option becomes a recognized option unless the Director notifies the market or clearing corporation within 10 days that the Director refuses to accept the option. No changes to contract specifications of a recognized option that is material without the prior approval of the Director. The recognized market may implement the change unless the Director, within 10 business days indicates that she has refused to accept the change.

Contracts traded on a recognized commodity futures exchange are filed with the Commission and must be accepted by the Director if she is satisfied that to do so would not be prejudicial to the public interest (section 36 of the CFA).

CANADA-QUEBEC

System

An electronic trading system that chooses to be an exchange in Québec must seek recognition under the *Securities Act*.

As part of the recognition under the *Securities Act*, the CVMQ consider the following issues: capacity, competence, governance structure, access and whether any of the exchange policies and rules or by-laws.

The constituting documents, by-laws and operating rules of an organization must provide for ;

- 1) unrestricted membership for every person who fulfils the conditions of admission;
- 2) equal access to services for every member;
- 3) the disciplining of members of their representatives for breach of the by-laws or operating rules of the organization or contravention of the Act or the regulations.

Every draft amendment to the constituting documents, by-laws or operating rules of a recognized organization must be submitted to the CVMQ for approval.

In the proposed regulatory framework for ATSS, we are proposing that an ATS file certain documents including: an initial operation report, any amendments before implementing a change to its operations that is material, a quarterly statement of any changes, quarterly trading reports. This information is required more for information than approval. We are also proposing that ATSS make and keep the records necessary to create a meaningful audit trail. Specifically, ATSS are required to maintain daily summaries of trading and time-sequenced records of order information, including the date and time the order was received, the date, time and price at which the order was executed and the identity of the parties to the transaction. These recordkeeping requirements also require the ATS to keep records of all notices provided to subscribers, including notices addressing hours of operation, system malfunctions, changes to system procedures, and instructions pertaining to access to the ATS. In addition, ATSS are required to keep documents made (if any) in the course of complying with the systems capacity, integrity

and security standards. These documents include all reports to an ATS's senior management and records concerning current and future capacity estimates and the results of any stress tests conducted.

FRANCE

- a) Review of system and rules : a trading system applying for recognition as a regulated market would have to submit market rules and all relevant information (see below 9) to the Conseil des Marchés Financiers. Based on the review of this complete set of information and documentation, the CMF would then propose the recognition of the market as a regulated market to the Minister of Finance, transmit its recommendation, as well as the information and documentation on which this recommendation is based, to the COB and to the Banque de France in order to allow them to express their formal opinion on such recognition to the Minister of Finance. The CMF must decide whether or not to propose the recognition of the market as a regulated within three months upon receipt of the complete file (additional requests from the CMF would suspend the 3 months delay). The recognition of the market as a regulated market by the Minister of Finance together with the market rules are published at the "Journal Officiel" (the equivalent of the Federal Register). Amendments to market rules are notified by the exchange to the CMF, the COB and the Banque de France. The CMF decides within one month (with possible exception) on the consistency of the proposed changes with the recognition as a regulated market, informs the COB and the Banque de France of its decision and refers any incompatibility of the proposed changes with such recognition to the Minister of Finance. The COB and the Banque de France have then to decide whether they agree with the decision reached by the CMF. In case of disagreement with the decision of the CMF, the COB and the Banque de France may appeal to the Minister of Finance within 15 days of the notification of such decision. The proposed amendments may then be implemented after publication at the "Bulletin" of the CMF.

b) Approval and review of contracts

When an exchange wants to list and trade a new contract, it must send a file to the COB comprising the characteristics of the new contract together with the information document on the contract that will be annexed to the risk disclosure document of the exchange. The COB then decides whether it will use or not its veto right to the admission to trading of the new contract and approves the information document describing the contract. The Commission will oppose the admission to trading of any financial instruments, including futures contracts, if it deems that such admission to trading would generate risks incompatible with the protection of investors interests and with market integrity.

Changes to the characteristics of a contract are also submitted to the COB for no-opposition.

Formally, the COB must act within the five business days following the request of the exchange. However, since the Commission could oppose the admission to trading for lack of information, the staff of the Commission review the contracts based on an informal application of the exchange several weeks before the formal application.

GERMANY

Review of systems: A new exchange would be required to seek approval under the Exchange Act (federal law) by the respective State Exchange Supervisory Authority as an exchange. The exchange has to submit relevant rules and documents for approval to the State Exchange Supervisory Authority. The rules and regulations as well as the systems must comply with the Exchange Act and ensure an orderly trading process and clearing and settlement. Amendments to rules and regulations also need approval of the State Exchange Supervisory Authority. According to the Exchange Act and the exchange Regulations the Board of Management is responsible for the admission of options and futures contracts to options and futures trading and decides on the commencement, suspension or discontinuation of options and futures trading.

HONG KONG

Exchanges

- (a) Initially, *authorisation* of the stock exchange is covered by s.3. of the SEUO, which states that for an exchange to be recognised it must comply with, among other things, the requirements of the:
- "provision and maintenance of, to the satisfaction of the Commission, of adequate and properly equipped premises for the conduct of the business of a stock market"*
- The futures exchange must in turn satisfy the parallel requirements of the CTO.

These are initial requirements. There are continuing requirements in this regard for exchanges under s.(4)(d) of the SFCO which specifies that the Commission shall be:

“responsible for supervising and monitoring the activities of the Exchange Companies and clearing houses”

In terms of *continuing* requirements and in the absence of ‘maintenance’ the SFC may (theoretically) revoke its recognition of the exchange. It may also issue a direction under s.50 (1)(a)(ii) of the Securities and Futures Commission Ordinance (SFCO) which enables the Commission to direct the exchanges, to take specified actions, including upgrading the screen-based trading system.

- (b) Revisions or modifications of SEHK and HKFE rules pertaining to screen-based trading systems must be submitted to the SFC for approval.
- (c) The SFS, when approving a new product to be traded on an exchange trading system, will consider and review the system stability, capacity and reliability to ensure the system can handle additional product trading and volume. The SFC may employ external IT Consultants to help in this process. In addition, SFC may require the respective exchange to obtain an independent third party assessment.

Members

While dealers also have eligibility requirements to become a member/registered person of the respective exchange companies (currently s11-14 of the SEUO and s26-32 of the CTO) it should be noted that members/registered persons are subject to ongoing formal requirements to maintain their membership/registered status.

Applicants for registration as a dealer must satisfy the SFC that they are properly qualified and are in all respects fit and proper to be registered. Once registered, a dealer must continue to be in all respects a fit and proper person to remain registered as a dealer. Where the Commission has evidence that such a person is no longer fit and proper, he will be subject to disciplinary action and possibly the suspension or revocation of his registration.

ITALY

The exchange must submit all relevant rules, including operational rules, to CONSOB. In order to be authorized, exchange rules must grant transparency, orderly trading and investor protection.

Market rules must sufficiently describe the operation of the trading system and permit a complete analysis of the system as contemplated by the IOSCO 1990 Principles. Furthermore any amendment to exchange rules must be submitted to CONSOB.

JAPAN – MOF

- (a) Review of system: An entirely new exchange would be required to seek a license as a securities exchange under the SEL or a financial futures exchange under the FFTL, according to the type of its trading contracts. The exchange must submit relevant rules and documents to the MOF. Overall, the MOF examines the particulars of any rules and documents in light of the relevant stipulations of the SEL or the FFTL, which require exchanges to insure the fairness of transactions and the protection of investors (it doesn’t regard whether its system is electronic or non-electronic).

An existing exchange that has been licensed must submit the modification of rules, if any, for the approval of the MOF.

- (b) Review of contracts: The exchange must apply for approval of listing of the new contract and/or of the relevant rules to trade the contract.

THE NETHERLANDS

- (a) Review of system:
 - New exchanges (which are not regulated markets under the Investment Services Directive) must be recognized as an exchange under the Act on the Supervision of Securities Trade 1995 (Wte 1995). If the exchange does not qualify for dispensation, it must submit all relevant rules (including operational rules) to the STE and document its ability to comply with article 22 of the Act on the Supervision of

Securities Trade 1995 (Wte 1995). With regard to the electronic system itself there are no separate rules.

- Exchanges which are regulated regulated markets under the Investment Services Directive EU-directive are exempted.

Review of contracts: An exchange located in the Netherlands must apply for recognition as an exchange to trade a specific contract and must submit information to the STE. The Ministry of Finance grants a recognition only when certain standards are met. Changes in regulation/rules of the exchange (i.e. contract specifications) must be approved by the STE.

SPAIN

- a) Review of the system. A new exchange must meet the whole of the criteria contained in the Royal Decree, which regulates Spanish Futures & Options Exchanges. Trading systems and their rules are a part of the rules that must be approved by the Ministry of Finance by CNMV's proposal.

Review of contracts. The CNMV or the Ministry of Economy must approve new contracts and its subsequent reviews (when a relevant monetary policy issue is involved). A positive compulsory inform from the Exchanges where the underlying is traded (Equity), Bank of Spain (interest rates) or the Ministry of Agriculture (Commodities) is required.

UNITED KINGDOM

Review of system: A new applicant must submit an application to the FSA demonstrating its ability to meet the recognition criteria for exchanges (FS Act, Schedule 4)²⁶. The focus of this process is a review of the proposed rules of the exchange and the means by which it will deliver its service. This review will be wide-ranging, covering every aspect of the proposed business, including the facilities by which trading is to occur – whether electronic or not.

Where an exchange that is already recognised proposes to make a major change to its trading process, e.g. by moving from a pit to an electronic system, the FSA would expect the exchange to pre-consult with the FSA on the detail of the proposed change. In any event, the exchange must be in a position to demonstrate to the FSA that in adopting a new trading process it will continue to comply with the recognition criteria.

Review of contracts: An exchange is required to limit dealings to investments in which there is a proper market. The FSA is not required to pre-approve contracts but would nonetheless expect to be pre-consulted where an exchange proposed to introduce a new type of contract or to make significant changes to existing ones.

Public consultation: Neither the exchange application, nor rule or contract review entail public consultation. However, the applicant's rules need to be approved by the Office of Fair Trading, which is also mandated to monitor subsequent rule changes for any anti-competitive effects.

Time frame: Typically, the process will take 6-12 months, depending on the complexity of the application and quality of its presentation (but may take less time if the applicant and its activities are already known to the FSA, thus simplifying the due diligence process).

UNITED STATES – CFTC

(a) Review of system: An entirely new exchange (i.e., never designated as a contract market) would be required to seek designation as a contract market under the CEA. The exchange must submit all relevant rules (including operational rules) to the CFTC and document its ability to comply with CFTC rules and self-regulatory responsibilities under the CEA. Overall, the CFTC reviews the particulars of any proposal in light of the CFTC's obligations under the CEA to maintain the integrity of US markets and to provide for the protection of US customers. With regard to the electronic system itself, the exchange must submit

²⁶ Under the Financial Services & Markets Bill, the recognition criteria will no longer be part of the primary legislation but will be established by statutory instrument (simplifying the process for making future changes).

relevant exchange rules and information sufficient to describe the operation of the system and sufficient to permit an analysis of the system as contemplated by the IOSCO 1990 Principles. See, e.g., staff memorandum recommending designation of Cantor Financial Futures Exchange dated September 1, 1998. [documents available at www.cftc.gov; go to “trading and markets,” then select “electronic trading and other issues.”]

An existing exchange that previously had been designated as a contract market would submit the rules implementing the electronic system for CFTC review and approval under section 5a(a)(12) of the CEA. See, e.g., Staff memorandum recommending approval of CME’s Globex system dated February 2, 1989.

(b) Review of contracts: The exchange must apply for designation as a contract market to trade a specific contract and must submit information to the CFTC as called for by Guideline No. 1. 17 CFR Part 5, Appendix A. Most contract designation applications are acted upon within three months or less. Special “fast-track” procedures permit exchanges that have previously received contract market designation to receive designation in cash-settled contracts within 10 days under certain circumstances. See 17 CFR 5.1.

Subsequent revisions: Revisions to any previously approved contract market rule similarly must be submitted to the CFTC for its review and/or prior approval.

Public Notice: The CFTC may not approve any rules it determines to be of “economic significance” unless it provides public notice of such rules in the *Federal Register* and gives interested persons an opportunity to comment.

Time deadlines: The CEA requires contract market designations to be acted upon within 1 year. All contract market rules not associated with an initial designation of a market are subject to varying time deadlines for CFTC action; some rules may be put into effect immediately, after 10 days or after 45 days, unless extended by the CFTC under certain conditions.

UNITED STATES – SEC

National Securities Exchange

Exchanges must file an application for registration as a national securities exchange or exemption from registration based on limited volume with the Commission on Form 1. National securities exchanges must also file periodic amendments to Form 1. In addition, national securities exchanges are required to submit proposed changes to their rules for Commission approval, including those applicable to screen based trading and new derivative products. In the typical case, the Commission publishes notice of the proposed rule change for a 21-day comment period. Between the 30th and 35th day following publication of the notice in the *Federal Register*, the Commission may issue an order granting approval of the proposal. Exchange rule change proposals may also be eligible for immediate effectiveness or accelerated approval depending on the nature of the rule change. If the Commission determines that the rule change proposal should be disapproved, it must conduct a hearing prior to making a final determination. See Section 19 of the Exchange Act.

Alternative Trading System²⁷

An alternative trading system may register as a broker-dealer and comply with Regulation ATS. Broker-dealers register with the Commission by filing an application on Form BD. In addition broker-dealers are required to be members of an SRO, such as the National Association of Securities Dealers, Inc. or a registered national securities exchange. Alternative trading systems are required to file notice with the Commission 20 days prior to operating. In addition, alternative trading systems must file quarterly reports and notify the Commission of any material changes to the system.

Pilot Trading System

²⁷ This survey applies only to “non-proprietary” trading systems. Presently, all alternative trading systems are proprietary. Accordingly, unless otherwise indicated, survey responses will not address alternative trading systems.

Exchanges may operate separate trading systems for a pilot period without filing a proposed rule change for approval by the Commission under an exemption from Section 19. Pilot trading systems operated by national securities exchanges or associations pursuant to an exemption under Rule 19b-5 must file notice of operation with the Commission, notify the Commission of material changes to the system, and file quarterly reports.

ARGENTINA

An entirely new market, never designated as a futures market, would be required first to seek designation as a futures market. So, the market must submit all relevant rules (including operational rules) to the CNV. The CNV reviews the particulars of any proposal.

As mentioned in answer 1 above, at the moment there are no laws, rules or regulations specifically addressing electronic screen-based trading systems.

Nevertheless, with regard to the electronic system itself, the market must submit relevant rules and information sufficient to describe the operation of the system.

An existing market that previously had been designated as a futures market would submit the rules implementing the electronic system for CNV review and approval.

BRAZIL

The process of system review or authorization depends upon the presentation of the following documents:

- Memorandum of Association and Bylaws;
- Demonstration of economical, technical and financial capacity;
- Description of the system including: rules and procedures regarding trading, registering, settlement and clearing; disclosure of operations and orders; members qualifications; rules on clearing and guaranty funds.
- Conditions to the inclusion, suspension or canceling of a specific security;
- Name and qualification of all the managers of the system operator;
- Any other information that CVM may need.

CVM has 90 days to analyze the request, with one interruption in case additional information is needed. Any change in the systems regulations and procedures shall be presented to CVM prior to its establishment. CVM will have 30 days to analyze the changes.

JAPAN – MITI/MAFF

- a) Review of the system: An entirely new exchange would be required to seek a license as a commodity futures exchange under the CEL. The exchange must submit relevant rules and documents to the MAFF or MITI. Overall, the MAFF or MITI examines the particulars of any rules and documents in light of the relevant stipulations of the CEL, which requires exchanges to insure the fairness of transactions and the protection of investors (it doesn't regard whether its system is electronic or non-electronic). An existing exchange that has been licensed must submit the modification of rules, if any, for the approval of the MAFF or MITI .
- b) Review of contracts: The exchange must apply for approval by the MAFF or MITI of the listing of the new contract and/or of the relevant rules to trade the contract.

MALAYSIA

An exchange readiness audit is conducted before commencement of trading on an electronic system and a systems audit is conducted on a regular basis.

SINGAPORE

(a) Markets/Exchanges. If a new system is deemed a futures market under section 2 FTA, a person establishing or maintaining it has to be approved as a Futures Exchange under section 4 FTA. Such a person has to submit an application in the prescribed form, which shall be accompanied by certified true copies of its business rules, Memorandum and Articles of Association. The application fee of \$2,000 is payable on lodgment of the application.

MAS may, in writing, approve the application if it is satisfied that the business rules of the proposed exchange satisfies certain prescribed requirements (see response to question 9).

In the case of an approved Futures Exchange seeking to amend or add to its business rules, section 6 of the FTA requires the Exchange to forward a written notice to the MAS giving the text of the amendment, the date on which it was made and an explanation of the purpose of the amendment. MAS may within 28 days after receipt of notice disallow the amendment, in whole or in part.

(b) Futures Contracts. An approved Futures Exchange shall not list or de-list any futures contract on its Exchange or operate any electronic facility for trading of any futures contract without seeking MAS approval: see section 5(1) FTA. The MAS may grant approval for the listing of the futures contract or for the trading of any futures contract on any electronic facility on a Futures Exchange subject to such conditions as it thinks fit

9. If there is an authorization process, describe briefly what standard must be met to receive approval or authorization.

The majority of jurisdictions follow explicit criteria mandated by laws or rules for authorization of markets.

As noted in #1, these laws/rules are the general laws authorizing markets and are not specific to electronic systems.

AUSTRALIA

Corporations Law Section 1126(2) [Criteria for approval as futures exchange]

Where a body applies for approval as a futures exchange, the Minister may by writing approve the body as a futures exchange if, and only if, he or she is satisfied that:

- (c) the body's business rules make satisfactory provision:
 - (i) for the admission as members of persons licensed, or proposing to apply to be licensed, under Part 8.3, or of a specified class of such persons;
 - (ii) for the qualifications for membership, including the necessary standards of training and experience for:
 - (A) responsible officers of bodies corporate that; and
 - (B) natural persons who;
are, or propose to be, members;
 - (iii) for the manner in which members are to conduct their business of dealing in futures contracts so as to ensure efficiency, honesty and fair practice in relation to such dealing;
 - (iiia) for the exclusion of a body corporate from membership where a responsible officer of the body corporate would be excluded from membership;
 - (iv) for the exclusion of a person from membership where:
 - (A) if the person is a body corporate - a responsible officer, or an employee, of the body corporate; or
 - (B) otherwise - the person or an employee of the person;
is not of good character and high business integrity;
 - (v) for the expulsion, suspension or disciplining of a member for conduct inconsistent with just and equitable principles in the transaction of business or for a contravention of the body's business rules or of this Chapter;
 - (vi) for an appropriate mechanism whereby a person whose application for membership of the body is refused, or whose membership of the body is cancelled or suspended, in circumstances where the person

- does not have a right to appeal to the Court under subsection 1135(1) against the decision to refuse the application, or to cancel or suspend the membership, as the case may be, may appeal against the decision;
- (vii) for an appropriate mechanism whereby a person who has been disciplined by the body otherwise than by way of cancellation or suspension of the person's membership of the body may appeal against the decision to discipline the person;
 - (viii) for the inspection and audit of the financial records that this Chapter requires members to keep;
 - (ix) with respect to the classes of futures contracts that may be dealt in by members;
 - (xi) prohibiting a member from accepting or executing, otherwise than in accordance with the business rules, instructions from another person to deal in futures contracts;
 - (xii) prohibiting a member from dealing in futures contracts on behalf of another person otherwise than in accordance with instructions accepted by the member from the person;
 - (xiii) prohibiting a member from dealing in futures contracts, on behalf of another person, on a futures market of a futures exchange or of a recognised futures exchange, otherwise than in accordance with the business rules of the futures exchange or recognised futures exchange, as the case may be;
 - (xiv) prohibiting a member, except as permitted by the business rules, from executing the instructions of another person to deal in futures contracts unless the instructions are executed in such a manner that the dealing is effected on a futures market of a futures exchange or of a recognised futures exchange or on an exempt futures market;
 - (xv) with respect to the conditions under which members may deal in futures contracts;
 - (xvi) for the equitable and expeditious settlement of claims and grievances between members, being claims and grievances relating to the transaction of business by members in their capacity as members;
 - (xvii) for appropriate mechanisms for the conciliation and settlement of disputes between members and their clients, being disputes concerning dealings in futures contracts by members on behalf of their clients or concerning transactions between members and their clients in connection with such dealings; and
 - (xviii) generally for carrying on the business of the proposed futures exchange with due regard for the interests and protection of the public;
- (d) there will be enough money in the body's fidelity fund to make the payments out of the fund that may reasonably be expected to be necessary for the purposes of Part 8.6; and
 - (e) the interests of the public will be served by granting the application.

CANADA – ONTARIO

Under the *Securities Act*, the Commission may recognize the person or company proposing to carry on business as an exchange if the Commission is satisfied that to do so would be in the public interest.

Under the CFA, the Commission shall grant registration to a commodity futures exchange where it is satisfied that to do so would not be prejudicial to the public interest and in making its decision shall consider whether:

- . the clearing and other arrangements made and the financial condition of the commodity futures exchange, its clearinghouse and its members are such as to provide reasonable assurance that all obligations arising out of contracts entered into on the exchange will be met;
- . the rules and regulations applicable to the exchange members and clearing house members are in the public interest and are actively enforced;
- . floor trading practices are fair and properly supervised;
- . adequate measures have been taken to prevent manipulation and excessive speculation

adequate provision has been made to record and publish details of trading including volume and open interest; and the exchange has satisfied or can satisfy all conditions prescribed under the regulations for the conduct of the business of an exchange.

Rules, by-laws, policies, procedures that are considered to be □public interest□ etc would be reviewed by staff to determine whether approval is in the public interest.

To approve a contract under the CFA, the Director considers whether more than occasional use is made or is expected to be made of the contract for hedging purposes, each term or condition is in conformity with normal commercial practices or if not, there is reasonable justification therefor, satisfactory levels of margin, daily price limits, trading limits and position limits have been imposed, with respect to an option, the form of the commodity futures contract that is the subject to the option has been accepted and the Director is assured that the established rules and procedures of the exchange are actively enforced.

CANADA-QUEBEC

Under the *Securities Act*, a stock exchange or a clearinghouse must be recognized by the CVMQ as a self-regulatory organization.

While recognized as a self-regulatory organization, amendments to rules, by-laws of a stock exchange or a clearinghouse would be reviewed by staff and approved by the CVMQ.

FRANCE

Under the Modernization of Financial Activities Act of July 2, 1996, « The 1996 Act » (article 42) in order to be recognized as a regulated market, a market for financial instruments must provide for regular trading. The rules governing the market, and enacted by the market undertaking ruling the market, must include, inter alia, membership requirements, listing requirements, the organization of trading, conditions under which trading in one or more financial instruments may be halted as well as rules for the recording and disclosure of transactions.

The General Regulation of the CMF provides that, in order to propose the recognition of a market as a regulated market, the CMF takes into account, in addition to market rules, the following elements :

- the by-laws of the market undertaking (including its code of conduct) ;
- the identity of the market undertaking's shareholders ;
- the human, technical and financial means of the market undertaking ;
- the fitness and integrity of its management ;
- where relevant, the rules of the clearing house (trades on a regulated derivative markets must be cleared by a clearing house).

In addition, the General Regulation of the Conseil des marchés financiers (CMF) set forth the general organizational and operating principles that regulated markets must observe and the rules governing execution, reporting and disclosure of transactions in financial instruments traded on those markets., Additional guidance relevant to standards required form regulated markets are laid out in title IV of the General Regulation of the Conseil des Marchés Financiers. They relate to rules of conduct to be met by market undertakings (section 2), membership (section 4) trading (section 5), concentration of transactions on a regulated market : principle and derogation (section 6), provisions specific to securities markets (section 7) and specific to futures markets (section 8)

GERMANY

See No. 8.

HONG KONG

Standards prescribed by law. As above.

ITALY

Under decree 58/1998 before authorising a regulated market, Consob must verify that:

- a) market regulation grant transparency, orderly trading and investors protection;
- b) the company managing the regulated market is an incorporated company;

- c) the company has a minimum net capital of at least 10 billion liras;
 - d) the management of the company satisfy the integrity and experience requirements set by law;
 - e) the stockholders satisfy the integrity and suitability requirements set by law.
- The rules establishing the operation of the electronic system itself should grant the transparency of the trading and an orderly market.

JAPAN – MOF

To give a license, the MOF examines the particulars of any rules and documents in light of the relevant stipulations of the SEL or the FFTL, which require exchanges to insure the fairness of transactions and the protection of investors (it doesn't regard whether its system is electronic or non-electronic).

THE NETHERLANDS

A new exchange must meet the criteria for contract market designation as set forth in article 22 of the Act on the Supervision of Securities Trade 1995 (Wte 1995), among others :

- the management of the exchange must have expert knowledge and be passed fit and proper for their duties;
- financial position of the exchange (the exchange must have sufficient means);
- clearing system;
- (compliance and enforcement of) exchanges rules and regulation;
- listings standards;
- liquidity.

Electronic systems must meet/ensure the general objective standards as stated above.

SPAIN

Royal Decree 1841/91 sets the standards that contracts and exchanges must meet. Standards include contract specifications, rules applicable to Government Bodies of the Exchanges, minimum capital required for exchanges, margins.

UNITED KINGDOM

A Recognised Investment Exchange must satisfy the FSA that it meets the criteria set out in FS Act, Schedule 4. Briefly, these require an RIE to :

1. have financial resources sufficient for the proper performance of functions;
2. ensure business on the exchange is conducted in an orderly manner and so as to afford proper protection to investors;
3. limit dealings on the exchange to investments in which there is a proper market;
4. require issuers of investments traded on the exchange (where relevant) to comply with obligations that ensure people dealing in the investments have proper information to determine their current value;
5. have arrangements to ensure the performance of transactions entered into on the exchange;
6. have satisfactory arrangements for recording those transactions;
7. have adequate arrangements and resources for effective monitoring and enforcement of compliance with its rules and clearing arrangements;
8. have effective arrangements for the investigation of complaints; and
9. be able and willing to promote and maintain high standards of integrity and fair dealing, and to co-operate with other market supervisors and regulators.

The recognition criteria for investment exchanges are set out in full in Schedule 4 of the FS Act. The draft recognition requirements being proposed for introduction under the Financial Services and Markets Act revise the wording of some of the present requirements and include a specific requirement relating to systems and controls and include a new requirement requiring an exchange to be a ‘fit and proper organisation’.

UNITED STATES – CFTC

A new exchange must meet the criteria for contract market designation as set forth in section 5 of the CEA: the board of trade: is located in a terminal market where the underlying commodity is sold in sufficient volume so as to reflect the general value of the commodity; provides for the making and filing of records regarding all aspects of the transaction; prohibits the dissemination of false or misleading information; provides for the prevention of manipulation of prices; does not exclude any duly authorized representative of a lawful cooperative association; provides for compliance with CFTC orders and rules; demonstrates that the futures transaction will not be contrary to the public interest; complies with the audit trail requirements of section 5a(b) of the CEA.

The rules establishing the electronic system itself would be reviewed under section 5a(a)(12) of the CEA and CFTC rule 1.41 for a finding that the rules were not inconsistent with all applicable CEA provisions and relevant CFTC rules. As noted in question 8 above, overall, the CFTC reviews the particulars of any proposal in light of all applicable specific CEA provisions and CFTC rules that address customer protection and market integrity (e.g., system must provide for open and competitive trading). For this purpose, the CFTC reviews electronic systems to ensure that they meet the general objective standards of that statement of policy.

For contracts: Essentially, a finding is required that the proposed contract reasonably can be expected to be used for hedging on more than an occasional basis and that the terms and conditions of the contract do not appear to make the contract readily susceptible to price manipulation or other distortion and are otherwise consistent with section 5(7) of the CEA which requires that contract market designation not be contrary to the public interest (which is essentially met by demonstrating the former and that the contract reflects the existing cash market).

UNITED STATES – SEC

Trading systems that meet the definition of “exchange” set forth in Rule 3b-12 may apply for registration as a national securities exchange by filing an application with the Commission. Generally, national securities exchanges must comply with requirements regarding the following areas: 1) self regulatory responsibilities, such as enforcement and discipline of members; 2) fair representation; 3) membership on the national securities exchange; 4) fair access; 5) operational capacity; 6) registration of securities; 7) national market system participation; 8) uniform trading standards; and 9) proposed rule changes. See Exchange Release Section IV.B and C (providing a more detailed description of the requirements for exchange registration).

ARGENTINA

As a general rule, new markets must meet the requirements as set forth in CNV General Resolution # 194/92: be formed and registered as a stock corporation; provides for the making and filing of records regarding all aspects of the transaction; provides rules for the registration and supervision of intermediaries; prohibits the dissemination of false or misleading information; provides for the prevention of manipulation of prices; etc.

As mentioned in answer 1 above, at the moment there are no rules or regulations specifically addressing the review process of electronic screen-based trading systems. As noted in question 8 above, the CNV reviews the particulars of any proposal in light of all applicable specific CNV rules that address customer protection and market integrity (e.g., system must provide for open and competitive trading). For this

purpose, the CNV reviews electronic systems to ensure that they meet the general objective standards of that statement of policy.

BRAZIL

In case of a new Exchange, criteria to be met relates to NMC Resolution N° 1.656. Basic standard requirements are:

- Exchanges are non-profit civil associations with established social objectives described by the first article of the Resolution N° 1.656;
- Limited number of brokers members of the exchange, and authorization for new members depends on CVM's surveillance criteria;
- Exchanges asking for authorization should present, at least, the following documents: bylaws; Memorandum of Association; registering documentation from the County District where it's located; compliance documentation of the Administration Board; report of the economic relevance of its existence to the region where its located; and any other documentation CVM might ask.

JAPAN – MITI/MAFF

See answer to item #8.

MALAYSIA

N/A

SINGAPORE

MAS may approve a body corporate as a Futures Exchange if it satisfied that the business rules of the body corporate maintain the integrity of the market and provide for the protection of investors. In particular, the rules must meet the following criteria:

- excludes from membership persons who are not of good character;
- provides for expulsion, suspension or disciplining of members for conduct inconsistent with just and equitable principles and business rules of the exchange;
- provides for terms and conditions under which futures contracts may be made;
- provides for clearing and other arrangements;
- provides that floor trading practices are fair and properly supervised;
- prohibits manipulation and excessive speculation;
- records and publishes details of trading adequately;
- establishes a compensation fund; and
- generally has due regard to the interests and protection of the public.

In addition, MAS must believe that the grant of approval furthers the interests of the public.

In addition to its power to approve amendments and additions to the business rules, the MAS may, under section 6(4) FTA, of its own motion alter or supplement the business rules of the Exchange, or the terms and conditions of any futures contract traded on the Exchange, if it feels that this is necessary for the protection of traders or to ensure fair dealing in a futures market.

10. What kind of professionals make these determinations or otherwise are involved in your analysis of systems (i.e., lawyers, computer specialists, economists etc.)?

Generally staff attorneys and economists or accountants are involved.

Nine jurisdictions report use of computer specialists (either on staff or independent consultants).

AUSTRALIA

ASIC's legal and policy officers to review applications.

ASIC does not employ any computer specialists directly for assessment of these types of applications. If ASIC considers that the integrity or functionality of a computer system is material to an application, it relies on external independent computer experts to provide it with any review or audit of computer systems which are required for proposed markets.

CANADA – ONTARIO

Currently, lawyers make recommendations regarding recognition to the Commission. We may consult with accountants, economists and computer specialists. Recommendations are made to the Commission or the Director, as appropriate.

CANADA – QUEBEC

Currently, CVMQ staff (which include lawyers and accountants) make recommendations regarding recognition to the CVMQ. Recommendations are made to the Commission or the Director, as appropriate.

FRANCE

Staff from the COB and the CMF (lawyers, economists...)

GERMANY

The trading system is being tested and analysed by the IT-department of the exchange. The exchange submits its results to the State Exchange Supervisory Authority for review.

HONG KONG

See 9.

ITALY

Staff attorneys and economists review the rules supplied by the exchange and make recommendations to the Commission. The Commissioners of CONSOB decide on authorization.

JAPAN - MOF

The rules of operation must be approved by the MOF. Professionals at the exchange and the developer carefully test the systems.

THE NETHERLANDS

Staff attorneys, economists and, for electronic systems, computer specialists of the STE. The STE advises the Ministry of Finance (who recognizes the exchange).

SPAIN

Economists, Staff attorneys and computer analyst.

UNITED KINGDOM

The issue of an order declaring an organisation to be an RIE must be approved by the FSA board, and HM Treasury must have given the FSA leave to issue the order. Recommendations for recognition are prepared by FSA staff, which comprises a variety of professionals. Advice on technology obtained as part of this process is normally contracted from external consultants.

UNITED STATES – CFTC

Staff attorneys, economists and, for electronic systems, computer specialists review the filings and make recommendations to the CFTC. The Commissioners of the CFTC decide on designations.

UNITED STATES – SEC

The Commission employs attorneys, accountants, and economists. In addition, exchange applications are published for notice and comment from the public, including securities industry participants and competitors.

ARGENTINA

Staff (attorneys or economists) of the Division of Futures and Options Markets. The Commissioners of the CNV decide on designations.

BRAZIL

Analysts from the Market Surveillance Department and also from the Market Development Department. All these analysts are graduated either in law, business and/or economics.

JAPAN – MITI/MAFF

The electronic trading system is tested and analyzed by computer specialists of the system developer and the exchange. The exchange submits those results to MAFF or MITI for review.

MALAYSIA

N/A

SINGAPORE

Accountants and computer specialists from the MAS and SIMEX are involved in the determination of the suitability of markets/exchanges and contracts.

SUBJECTS OF INQUIRY

Technical

11. When assessing electronic screen-based trading systems (“trading system,” “electronic system” or “system”) (whether or not as part of an explicitly required process), which of the following items do you examine? Please describe briefly the standards/requirements you are seeking.

j) Access²⁸ requirements

k) Equality of access (differential access)

l) Transparency of orders and transaction information (e.g., prices, quantities, counterparties)

m) Capacity

n) Response time to all orders

²⁸ The term “access” refers broadly to the sending of orders and the execution of trades on an electronic system.

- o) **System security**
- p) **Data integrity**
- q) **System back-up and disaster recovery**
- r) **System architecture (e.g., connect with own equipment (open) or connect with provider's equipment (closed))**
- Other**

All jurisdictions report consideration of these factors.
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AUSTRALIA

- a) ***Access requirements***
ASIC requires that the business rules of a market operator make satisfactory provision restricting persons who have direct access to the market. Issues which the rules should address include:
 - (i) capital levels
 - (ii) standards of training and experience;
 - (iii) standards of conduct;
 - (iv) supervision;
 - (v) operational competency.
- b) ***Equality of access (differential access)***
ASIC requires fair and equal access within classes of members, and equity in access between classes of members.
- c) ***Transparency of orders and transaction information (e.g., prices, quantities, counterparties)***
ASIC generally requires pre and post trade transparency, except to the extent that the benefit to the market of facilitation of large orders offsets some small delay in pre-trade transparency. Where large order facilitation allows a reduction in transparency, ASIC requires the rules regulating large trades to be clearly disclosed to all market participants.
- d) ***Capacity***
ASIC requires applicants to demonstrate that their systems will be able to accept any reasonably foreseeable volume and value of orders. It is impossible to ensure that each system will be able to meet every conceivable order capacity, but ASIC requires a high margin of capacity.
- e) ***Response time to all orders***
ASIC requires applicants to demonstrate that their systems will be able to provide acceptable response times for any reasonably foreseeable order volumes, and response times which are equitable for all participants.
- f) ***System security***
ASIC requires applicants to demonstrate that their systems will have high levels of security.
- g) ***Data integrity***
ASIC requires applicants to demonstrate that their systems will have high levels of data integrity.
- h) ***System back-up and disaster recovery***
ASIC requires applicants to demonstrate that their systems will have acceptable disaster recovery and back up systems.

- i) System architecture (e.g., connect with own equipment (open) or connect with provider's equipment (closed))*
ASIC relies on the advice of independent system engineers that the system architecture will perform as advised by the exchange and as required for proper system functionality.
- j) Other*

CANADA – ONTARIO

In general, all of the items listed are examined. *Specifically, in the proposed regulatory framework for ATSS, we are proposing that an ATS report on the following information:*

- (a) the manner of operation of the ATS;*
- (b) procedures governing entry or orders into the ATS;*
- (c) the means of access to the ATS;*
- (d) the procedures governing execution, reporting clearance and settlement of transactions effected through the ATS;*
- (e) procedures for ensuring subscriber compliance with system guidelines;*
- (f) a copy of the ATSS subscriber manual and any other materials provided to subscribers; and*
- (g) a diagram showing the architecture of the system including communications network, processors, front end devices, gateways, firewalls and external systems connectors.*

We are also proposing that ATSS provide a brief description of the ATSS's procedures for reviewing system capacity, security and contingency planning procedures.

CANADA-QUEBEC

In general, all of the items listed are examined.

Specifically, in the proposed regulatory framework for ATSS, we are proposing that an ATS report on the following information:

- (a) the manner of operation of the ATS;*
- (b) procedures governing entry or orders into the ATS;*
- (c) the means of access to the ATS;*
- (d) the procedures governing execution, reporting clearance and settlement of transactions effected through the ATS;*
- (e) procedures for ensuring subscriber compliance with system guidelines;*
- (f) a copy of the ATSS subscriber manual and any other materials provided to subscribers; and*
- (g) a diagram showing the architecture of the system including communications network, processors, front end devices, gateways, firewalls and external systems connectors.*

We are also proposing that ATSS provide a brief description of the ATSS's procedures for reviewing system capacity, security and contingency planning procedures.

FRANCE

All factors (a) – (i) are examined and taken into account. The IOSCO 1990 Principles serve as a benchmark for the assessment of the items mentioned.

GERMANY

All factors are examined.

- a) - b) IOSCO Principle No. 6 applies.
- c) IOSCO Principle No. 2 applies.
- d) Ensure ability to process the projected volume of trading. Adequate reserve capacities.
- e) IOSCO Principle No. 3 applies.
- f) - i) IOSCO Principles No. 5, 6 and 7 apply.

The exchange must ensure orderly trading as well as orderly clearing and settlement.

The exchange must provide adequate back-up systems and contingency plans.

No specific rules regarding the system architecture.

HONG KONG

Briefly:

- a) *Access requirements*: appropriate access and adequate security
- b) *Equality of access*: ensuring no party suffers from a access disadvantage to the price discovery process; whether an access hierarchy exists (e.g. supervisor overview)
- c) *Transparency of orders and transaction information*: order flow, any evidence of unusual activity monitored, tracked and analysed.
- d) *Capacity*: ability of system to handle current and projected high turnover, volatility and volume days; ability of system to handle new product developments. Capacity of linkages should also be noted.
- e) *Response time to all orders*:
- f) *System security*; on a software level – usage of passwords or encryption procedures. On a hardware level – that the system itself is in a secure location.
- g) *Data integrity*:
- h) *System back-up and disaster recovery*: “Uninterrupt Power Supply” (UPS) system, back-up power generators, data retrieval, off-site capacity
- i) *System architecture*: refer to access and security requirements
- j) *Other*:
Robustness of system: Any system failures should be examined carefully, and explanations sought.
Appropriateness of any reports produced in accurate system’s analysis
Efficiency of data transfer
Flexibility of system platform in response to changing needs and connections.

ITALY

All the items are examined. In particular:

- a), b) Access to the electronic system should reflect the type of authorization each intermediary has been granted by Consob as well as guarantee the equality of access.
- c) The trading system should allow transparency of orders and transaction. Order book must be visible to all market participants as well as contracts concluded. Counterparts information must be not disclosed. Electronic system should also disclose relevant market information to the public.
- d) The exchange trading system capacity should be adequate for the forecasted order flow and trading volume. A “capacity planning” should also be issued.
- e) The system should be adequate to immediately sent orders from peripheral units to the central unit, immediately match bid/offer orders and to feed back transaction information to the intermediaries and to the clearing system.
- f), g), h) The system must provide a high security environment. In particular, the system must be safe of intrusions by non-authorized persons, physical and logical integrity of data must be preserved, data back-up system must operate and a disaster recovery system must be in place to reconstruct trading activity.
- i) No specific requirements are imposed; the system can be both open or close.
- j) In case of system default, the exchange must promptly fill Consob with a detailed report describing the problem raised, the actions taken to solve it.

Consob may conduct at any time on-site audit programs.

JAPAN – MOF

All factors a)- i) are examined. The MOF reviews the particulars of any proposal in light of its obligations under the SEL or the FFTL to maintain the fairness of transactions and the protection of investors in the Japanese market.

a),b)- IOSCO Principle 6 (ensure the competence, integrity, and authority of system users, to ensure that system users are adequately supervised, and that access to the system is not arbitrarily or discriminatory denied) applied.

c)- IOSCO Principle 2 (ensure equitable availability) applied.

d)- Ensure ability to accommodate the projected volume of trading; examine server capacity, performance standards.

e)- IOSCO Principle 3 (full descriptions of algorithm) and 4 (equitable operation) applied.

f)- i)- Essentially the system must provide a highly reliable and secure trading environment. IOSCO Principle 5 (risk assessment), 6 (user integrity), and 7 (consideration on additional risk management exposures) applied.

THE NETHERLANDS

All factors (a)-(i) are examined. The STE reviews the factors in the light of the general objective standards. Amsterdam Exchanges is the authorized authority for trade-specific requirements. As such AEX reviews the technical aspects of the system and reports to the STE.

The AEX-Stock Exchange has a Screen based trading system (called TSA). The Derivatives Exchange (AEX-Options Exchange) does not operate an screen based system. As this survey deals with screen based derivatives trading, it is not possible to answer the question 12 through 30.

SPAIN

a), b) Ensure equal access to markets and information

c) Members have real time information about prices and quantities of orders and executed transactions. These data is automatically released to vendors and in this way known by investors without delay. No counterpart information is disseminated.

d) The system capacity must prevent market disturbances due to orders and/or transactions jams.

e) The system must provide adequate and immediate flow of orders and information between trader's terminals and the exchange terminal. Time delays due to physical location should be tiny. Periodically, Exchanges review this matter.

f), g and h) The system must submit high security standards concerning data integrity, system access and system reliability. System and data back-ups are available for failures of principals. There must be twin systems, one located at the market offices and the other one in a different and secret location.

i) No specific requirements are imposed.

j) In case of system default, the exchange must inform immediately to the CNMV and make a report describing the failures causes and solutions carried out to avoid futures failures.

UNITED KINGDOM

In considering an exchange's ability to meet its obligations to ensure the orderly conduct of business and the proper protection of investors, the FSA gives extensive consideration to an exchange's systems arrangements.

Access: The FSA is concerned principally with secure access and equality of access. It favours equality of access, unless a good case can be made for some differentiation by class of participant (e.g. market makers with firm obligations).

Transparency: The FSA considers that there should be adequate and equitable access to information on orders and pricing on the screen. (N.B. In some cases, not all the trading in a product will take place on-screen)

Capacity: Applicants are expected to demonstrate that their systems have the capacity to handle projected business volumes and, in particular, to handle adequately surges in trading.

Response times: Equality is the aim but may not always be attainable. Exchanges are expected to maintain a time trail for all instructions entered into the system.

System security: the FSA expects exchanges to have adequate user access controls, including encryption, and (recognising the limitations of access controls) liability insurance to cover deliberate misuse of systems).

Data integrity: Exchanges are expected to demonstrate the integrity of their information handling and retention systems

Back-up/disaster recovery: An exchange must be able retain all information up to the point of failure. The FSA is flexible as to the arrangements an exchange may adopt for the continuation of trading in the event of systems failure.

System architecture: This is the choice of the exchange. Exchanges are expected to demonstrate that their arrangements are compatible with the orderly conduct of business and proper protection of investors. It is important that there is clarity of responsibility – as between exchange members and third party suppliers – in the event of problems arising with connections.

UNITED STATES – CFTC

All factors (a)-(i) are examined. The IOSCO 1990 Principles, which were adopted by the CFTC as a statement of regulatory policy, in large measure define the factors examined and the standards sought. The specific topics examined, of course, will reflect the specific technology and functions presented by a particular system. In addition, as noted previously, the CFTC reviews the particulars of any proposal in light of its obligations under the CEA to maintain the integrity of US markets and to provide for the protection of US customers. A major focus of review is on the competitiveness of the algorithm, equitable access to the trading system and technical aspects of the systems such as capacity and security.

(a), (b) – IOSCO Principle 6 objective applied (ensure access is not arbitrarily or discriminatorily applied)

(c) – IOSCO Principle 2 (ensure equitable availability)

(d) – Ensure ability to accommodate the projected volume of trading; examine server capacity, performance standards.

(e) – IOSCO Principle 3 (full description of algorithm) and 4 (equitable operation)

(f), (g), (h) and (i) – Essentially the system must provide a highly reliable and secure trading environment. IOSCO Principles 5, 6 (user integrity) and 7 are relevant. In addition, systems are reviewed by the CFTC's computer specialists, referring among other criteria, to the 1990 IOSCO Principles. This review includes on-site examination of system physical and logical security features, observation of mock trading sessions and verification of equipment configuration. System is examined for ability to handle high volumes and for redundancy in all system components (i.e., resistant to failure).

System security: Physical security must be adequate (who has physical access to the servers); logical security must be adequate (controls governing who has access to the operating program for system, encryption); user access requirements must be adequate (user IDs, passwords).

Data Integrity: Look at details of ability to reconstruct trading activity.

System reliability and disaster recovery: should provide a reliable trading environment, reliable power, backup and comprehensive disaster-recovery capabilities.

System testing: System capacity and performance should be sufficient to accommodate all levels of trading. Use of standard computer industry system testing to measure capacity, trade-entry functionality, middle-office and trade-flow functionality and network interfaces.

UNITED STATES – SEC

- a) and b) Exchanges are required to provide fair access. Exchanges may not unreasonably deny access or discriminate against members. See Section 6 of the Exchange Act.
- c) Exchanges are expected to participate in the National Market System. Currently, all the national securities exchanges and Nasdaq participate in market wide transaction and quotation reporting plans. Quotation and transaction information is publicly disseminated. More detailed data (e.g. counterparty) is reported to the exchange.
- d) Exchanges are expected to have adequate capacity to handle trading volume.
- e) Exchanges are required to have rules regarding trading procedures. See Section 6 of the Exchange Act.
- f), g), h), i) Exchanges are expected to comply with the Commission’s Automation Review Policy, which covers computer system capacity, integrity, and security to support the operation of the exchange.

ARGENTINA

As mentioned in answer 1 above, at the moment there are no rules or regulations specifically addressing the review process of electronic screen-based trading systems.

All factors (a) to (i) are examined. The specific topics examined, of course, will reflect the specific technology and functions presented by a particular system. In addition, as noted previously, the CNV reviews the particulars of any proposal in light of all applicable CNV rules regarding to maintenance of markets’ integrity and the protection of customers.

BRAZIL

All these issues are analyzed either to authorize a trading system or during continuous surveillance. It must be noted that organized dealer systems are very incipient in Brazil. Electronic derivatives trading is also very low in volume and number of contracts.

JAPAN – MITI/MAFF

All factors are examined.

- a) Access to the trading system is restricted to exchange members.
- b) Providing the same order entry terminals and proprietary lines, the exchange ensures that members can access the trading system in equal conditions.
- c) All trade information including price and quantity is disseminated by the exchange through the exchange information system or information vendors.
- d) The exchange must ensure ability to accommodate the projected volume of trading. With regard to futures trading, it is difficult to estimate the number of transactions during an auction due to its trading method, Itayose-hou.
- e) Response time is set by the exchange to not more than one second. Actual response time is recorded as four- tenth second. Response times are equitable for all members.
- f) The exchange safeguards, which include hardware and software management, must be reviewed.
- g) All trading data must be stored for a fixed time period. Trading activity is able to be reconstructed based on this data.
- h) The exchange shall prepare back-up systems in respect to the exchange internal system, member’s systems and proprietary lines in terms of disaster recovery.
- i) The current system is a closed-system.

MALAYSIA

- a) Fast, equivalent, secure, reliable access
 - b) Implementation of system/application solutions which allow for the following access control mechanisms
- Equivalency of access

- Load balancing
- Application and system driven access controls
- Adoption of clustering concepts which allow for one logical device comprising of many physical devices with transparent failover mechanisms allowing continuity of service
- Utilization of communication network solutions which allow for analysis and control of bandwidth access
 - c) Transparency of order and transaction information is a must
 - d) Scalable solution in terms of CPU, memory, disks, peripherals
 - e) The ability to ensure an equivalent response is the priority as opposed to speed
 - f) High degree of network, system and application level security, auditable at all levels
 - g) The application must have inbuilt integrity checks, balances, counters and audits with the ability to rollback.

The system must have inbuilt audit mechanisms with the ability to provide for data journalling and transparent failover mechanisms and disk shadowing abilities.

- h) Adequate procedures must be in place to ensure that data is retained to the timescale required to meet the statutory requirements and that the data is stored in a secured off site location. A facility must exist which will ensure that members can continue trading at a remote location within a reasonable timeframe if necessary and that all matched trades executed at the prime site are recoverable in the event of a disaster.
- I) A combination of both options would be the preference so that the solution can suit all business needs. i.e. that the members could choose to either utilize a centralized bureau service facility or install their own integrated front/middle/backoffice solutions
- j) Order routing facilities, information dissemination facilities, confirmation to industry standards and best practices

SINGAPORE

In approving the electronic trading system of an Exchange, MAS would ensure that access is not arbitrary and discriminatorily granted, trading in the system is properly and fairly conducted, and security measures are adequate, to provide a highly reliable and secured trading environment.

Other features of the system such as data integrity, system back-up and disaster recovery, and system architecture are examined to ensure prudential requirements in relation to record keeping and risk management are not compromised.

Access

12. Please describe your approach to the review and/or approval of the rules specifying the categories of persons who may “access” the screen-based system (i.e., considered broadly as the entry of orders for execution on the system). [“Direct access” (i.e., the ability to place orders directly to the system’s trade matching or execution function without the need for intermediation) should be distinguished from the transmission of customer orders via one or more intermediaries (e.g., customer uses electronic order routing system to place orders to an intermediary).]

Specifically, please describe the topics that you examine and/or review and note in particular whether you have any explicit requirements for obtaining access as a member, other permitted system participant, client or intermediary. Please describe and explain any differences. Among other things, please discuss if relevant:

- g) Regulatory authorization of any person with access to the system (i.e., is regulatory authorization required?);**
- h) Exchange membership or other participation standards (e.g., criteria regarding who may trade directly on the system; note whether non-members may have access);**
- i) Criteria for access (e.g., whether orders must go through an intermediary, whether a member or regulated intermediary must supervise trading, any associated financial integrity controls (“credit or position limit filters,” whether any human intervention is required), scope of information displayed to clients, verification of users’ identity);**
- j) Financial integrity standards (e.g., clearing membership or clearing bond requirements for persons who enter orders for execution on the system, position limits);**

- k) **Operational standards** (*e.g.*, criteria or restrictions concerning the specific individuals (*e.g.*, clerks, brokers, proprietary traders) who may input orders, where system terminals (if a dedicated system) or personal computers may be located, etc.); and
- l) **User competency** (*i.e.*, user certification, competency or training requirements).

(a) Access generally: In the first instance requirements permitting direct access to the electronic system are determined by the exchange.

The following jurisdictions require persons having direct access to systems be registered or licensed: Australia; Canada, Ontario and Quebec; Italy; US SEC (only registered broker-dealers may be members).

(b) Exchange membership standards: Exchange rules determine criteria.

(c) Criteria for access: Customer orders must be intermediated by exchange member

“Filters:” The following jurisdictions report requirements mandating automated credit filters: Australia, Italy [ability to monitor and stop orders]; Hong Kong reports mandated credit and position limits .

(d) Financial integrity standards: In all jurisdictions clearing members remain financially liable for trades and remain subject to capital requirements and regulatory oversight. Australia reports review of exchange rules to require adequate financial filters to ensure compliance by member with capital requirement.

(e) Operational standards: Operational standards established by the exchanges, typically subject to regulatory review.

(f) User competency: Regulation is determined at the exchange level. Rules reviewed by regulator.

AUSTRALIA

Currently, only Australian Stock Exchange (ASX) has received approval for business rules allowing Automated Client Order Processing Systems to be attached to members’ open interface systems. Approved clients have access to ASX’s equity and options markets (ASX uses the OM Click system for its screen based derivatives market) through members' systems.

The Sydney Futures Exchange is also moving towards a fully screen based trading system. It already has full screen trading for some contracts, and other contracts are traded by screens outside ordinary business hours in Australia. As part of its transition to full screen trading, it will introduce an open interface system. It is likely that the futures exchange will consider allowing Automated Client Order Processing Systems to be attached to members’ open interface systems. ASIC’s review, criteria and authorisation of the business rule changes required for this would be similar to the process conducted with the equities exchange.

a) *Regulatory authorisation of any person with access to the system (i.e., is regulatory authorisation required?);*

A combination of statutory legislation and business rules require any person with direct access to a market to be directly licensed or an authorised representative of a regulated person. Exchange rules require approval by the exchange of persons with access to closed system end terminals.

With the introduction of open interface systems by both the stock exchange and futures exchange, exchange members can provide screen based, indirect access to the system to selected clients. However, the exchange member remains directly responsible for any orders input through such a facility.

Exchange Business Rules, reviewed by ASIC and approved by the Minister, for Automated Order Processing require independent, expert certification of compliance with existing exchange Operational Requirements (including adequate automated electronic filters for external orders). The exchange has satisfied ASIC that its requirements for automated filters will ensure an orderly market.

b) Exchange membership or other participation standards (e.g., criteria regarding who may trade directly on the system; note whether non-members may have access);

ASIC has approved rules allowing automated processing of client orders to ASX's screen based trading system for options. These rules allow non-members indirect access. The rules require members to ensure that only persons who have been accredited and authorised by the member have access to any terminal or system which allows access to the exchange system through the member's open interface system. The exchange has specific operational requirements which provide details of the acceptable accreditation and security measures.

c) Criteria for access (e.g., whether orders must go through an intermediary, whether a member or regulated intermediary must supervise trading, any associated financial integrity controls ("credit or position limit filters," whether any human intervention is required), scope of information displayed to clients, verification of users' identity);

All orders are sent through the system of an exchange member. They have principal responsibility. ASIC requires that the exchanges' rules require adequate automated financial filters. Human intervention is not required.

d) Financial integrity standards (e.g., clearing membership or clearing bond requirements for persons who enter orders for execution on the system, position limits);

All members remain liable, as principal, for all orders entered to the system through their automated client order processing systems. ASIC has reviewed the exchange's rules and operational requirements for members to have adequate automated filter systems to ensure that the member's capital requirements are met at all times i.e. ensuring that the client has funds under the member's control, or any credit provided to a client does not cause the member to breach its capital requirements.

e) Operational standards (e.g., criteria or restrictions concerning the specific individuals (e.g., clerks, brokers, proprietary traders) who may input orders, where system terminals (if a dedicated system) or personal computers may be located, etc.); and

The exchanges' Business Rules restrict inputting of orders into broker terminals to individuals who have been certified. The exchanges set the certification standards. The exchanges' Business Rules require brokers to establish an accreditation system to ensure that the order entry staff of any client to whom the broker gives access to an automated order entry system know the rules and procedures of the automated order entry system. The exchanges ensure compliance with these rules.

f) User competency (i.e., user certification, competency or training requirements).

Exchange rules require member employees, and authorised client employees to be tested and certified competent to operate terminals linked to the exchange's market.

CANADA – ONTARIO

Direct Access- Direct access to a system operating in Ontario may be granted to persons or companies that are registered with the Commission. If a registrant in Ontario was a member of a foreign exchange and wished to have direct access to the foreign exchange, there are several considerations. Operating as a member with direct access to a foreign exchange may be considered to be operating a branch of the exchange which would subject the exchange to regulatory oversight in Ontario.

Access through intermediary registered in Ontario- Customer orders must be placed through an intermediary registered in Ontario. All registered intermediaries are subject to capital requirements.

CANADA-QUEBEC

Direct Access- Direct access to a system operating in Québec may be granted to persons or companies that are registered with the Commission.

If a registrant was a member of a foreign exchange and wished to have direct access to the foreign exchange, there are several considerations. Operating as a member with direct access to a foreign exchange would be considered as an exchange operating in Québec. Such exchange would be subject to regulatory oversight in Québec.

Access through intermediary registered in Québec- Customer orders must be placed through an intermediary registered in Québec. All registered intermediaries are subject to capital requirements.

FRANCE

The rules specifying who may access the systems are designated by the exchanges and included in the market rules subject to the approval of the CMF and the COB.

a) Regulatory authorization :

Under the Law of July 2, 1996, membership in a regulated market is opened to :

- Investment service providers (investment firm or bank) duly authorized to provide the relevant services (execution of orders for third parties, dealing for own account). In France, authorization (or registration) as an investment service provider is granted by the Comité des Etablissements de Crédit et des Entreprises d'Investissement (CECEI) after approval of the program of activities by the CMF. Investment service providers are under the prudential supervision of the Commission Bancaire (Banking Commission).
- Natural or legal persons authorized by the Conseil des Marchés Financiers to provide the two services referred to above.

Natural or legal persons authorized by the CMF may become market members (this was originally intended to cover “ locals ” trading for own account). The General Regulation of the CMF sets out the information to be included in the application file for authorization and the minimum capital requirements. They are required to sign an agreement with a clearing member.

- There are no special requirements for remote members from the EEA which are authorized as investment services provider in their jurisdiction.

Remote members from countries outside the EEA, or remote members from EEA countries that are not authorized as investment service provider in their home country, must be authorized by the CMF prior to applying for remote membership at the exchange. They must be under the control of a competent authority in their home jurisdiction.

Such duly authorized person may apply for membership at the exchange.

- b) Under the exchange rules, persons having physically access to the system i.e. who may enter orders must hold a trading license granted by the exchange

- Exchange rules specifies who may become a member provided the applicant met the regulatory requirements mentioned above in (a). Non members may not have direct access to the market.
- Exchanges may create membership categories which provide access to electronic trading for minimal cost : this is the case for own account traders who may trade only for own account.
- c) Customers orders must be placed on the market through a market member authorized as an investment services providers. Market members may set up electronic order routing systems with their customers but the orders are entered on the market under the full responsibilities of the market member (see principles relating to order routing systems above).
- d) As noted above, only market members authorized as investment service providers may enter orders for customers directly into the trade matching system. All investment services providers are subject to the capital requirement set up by the Comité de Réglementation Bancaire et Financière (Financial and Banking Committee), and to the prudential supervision of the Banking Commission. Non clearing members must have an agreement with a clearing member. Clearing houses regime higher capital requirement for clearing members. Under the CMF Regulation, clearing houses for derivative markets must set position limits and risk exposure applicable to market members and, when deemed necessary, may do so for all market participants (including customers).
- e) Trading terminals must be located in the members normal business premises, as identified at the time of membership (MONEP). Under MATIF rules, the normal business premises may include the market member's branches on condition that they are located in jurisdictions within the European Economic Area or in jurisdictions that have entered into an information sharing agreement with the COB. MATIF SA may also authorize a trading member to place trading terminal in the offices of one of its affiliates (parent, subsidiary, sister company) provided that such affiliate is located within the European Economic Area and is authorized as an investment services provider by the domestic competent authority. Any person operating a trading terminal, wherever located must have a trading license granted by the exchange. All trades originating from such terminals must be registered in the member of the trading/market member and are made under the trading member's entire responsibility.
- (f) The trading license is granted by the exchange after checking the users professional skills and knowledge.

GERMANY

- a) The rules specifying who may access the system are part of the Exchange Rules which need approval by the State Exchange Supervisory Authority.
The system can be accessed only by admitted members. Admission requires several preconditions, such as personal qualification, minimum capital, registration as broker with the exchange.
- b) Exchange rules specify who may become a member. See a) and also Part 1 e.
- c) Customer orders must go through an exchange member. The exchange might impose position limits on Market-Makers.
- d) See a) and Part 1c.
- e) See Part 1e.
- f) IOSCO Principle No. 6 applies. See also Part 1e and Part 1f.

HONG KONG

Only members of the SEHK (and soon the HKFE) are permitted to have trading terminals in their offices (i.e. only members are permitted to have direct access).

- a) The SEHK/HKFE Rules and "Management, Supervision and Internal Control Guidelines for Persons Registered with or Licensed by the Securities and Futures Commission" (Internal Control Guidelines) outline requirements for authorised users.
- b) Only members may have trading screens.
- c) Criteria for access:

- (i) Anyone may trade provided it is through a registered dealer. Registered dealers must apply their own requirements for counter-parties.
 - (ii) There are supervision of trading requirements (including operator competence and internal control guidelines) for dealers, who are the only parties who may trade via direct access.
 - (iii) There are both credit, and position limits for members of both exchanges. Traded products also have position limits. These are outlined in the rules of the respective exchanges.
 - (iv) The information that is passed onto clients is dependent on characteristics of individual dealer systems.
 - (v) Verification of user's identity requirements are included in authorised user specifications.
- (d) Only members may have trading screens, therefore there are automatically listing and continuing financial integrity standards which include:
- (i) Initial membership requirements
 - (ii) Collateral held by the Exchange
 - (iii) Margin requirements
 - (iv) Financial Resource Requirements
- (e) An operator must be authorised. Authorised persons must complete competency and training requirements. Trading screens may only be located in brokers' offices and on the SEHK/HKFE trading floors.
- (f) Internal Control Guidelines specify operator competency requirements. These include user certification, competency and training requirements.

ITALY

- a) Art. 25 of Leg. Decree n. 58/98 provides that only SIM's (securities firms) and Banks authorized to provide trading services on own account and on behalf of third parties, as well as authorized EU and non-EU investment firms may operate in Italian regulated markets. Authorization is granted by Consob and the Bank of Italy. Also Individual Stock Brokers (Agenti di cambio) may enter the market but only on behalf of their customers. CONSOB does not restrict or otherwise impose standards on the type of customer who may transmit orders (via electronic order routing systems or otherwise) to an intermediary for execution on an electronic system.
- (b) Exchange rules may specify who may become a market member and enter the market. However, market members must be authorized intermediaries and any exclusion criteria must be rigorously objective.
- (c) Customer orders must be placed only through an authorized intermediary. Orders placed by customers through order routing systems must be under the direct responsibility of the intermediary. Market regulation must, therefore, impose the use of inter-connection systems that provide facilities designed order to monitor client activity on a real time basis with the ability to stop, at any time, their order flows.
- (d) Only intermediaries may enter orders for customers directly into the trade matching system. All intermediaries are subject to capital requirements, to financial integrity requirements and oversight by Consob and the Bank of Italy. Capital requirements are also provided for clearing members, with distinction between general and individual clearing members.
- (e) Rules governing the specific persons who may input orders are issued by the exchange and reviewed by Consob.

- (f) Trading system users must be professional persons with a certain minimum trading experience. Specific professional requirements are requested of users that carry on market making or specialist activities.

JAPAN - MOF

- a) The SEL and the FFTL permit direct access to the system only to members (and, in the case of a securities exchange, special participants) of the exchange. In a securities exchange, the members are limited to registered securities companies, and the special participants are limited to registered securities companies and authorized financial institutions. Other specific requirements of members of exchange are designed by the exchange and require approval both of the MOF and of the Financial Supervisory Agency (FSA). Members may both access directly to the systems and act as brokers.
- b) Exchange rules specifying who may become a member are examined for fairness of access (i.e., all members should be treated the same). As noted in the answer to a), in a securities exchange, the members are limited to registered securities companies, and the special participants are limited to registered securities companies and authorized financial institutions.
- c) As customers have no direct access to the systems, they shall place orders to members (including special participants) of the exchange. The members shall take care of such orders. The exchange shall monitor its members' credibility and positions.
- d) All exchange members are subject to financial integrity requirements and oversight both by the FSA and by the exchange. All exchanges always monitor its member's positions.
- e) Other than the provisions that an employee of an exchange member may input orders, there are no restrictions as to persons to input orders. Exchange terminals may be placed wherever in a member's office in Japan upon approval from the exchange.
- f) IOSCO Principles 6 is applied to ensure that procedures are in place to ensure: (1) the competency, integrity and authority of system users; (2) that system users are adequately supervised and (3) that access to the system is not arbitrarily or discriminatorily denied.

THE NETHERLANDS

Not applicable (see question 11).

SPAIN

a) b) c) The rules specifying who may access to the system are designed by the exchange (art 4 of the Exchanges Rules and Regulations which are approved by the Minister of Economy by CNMV proposal). Under the current rules all the members have the same access to the trading system without restriction.

Except for MEFF RF, where firms can directly trade through remote screens (those installed in other place than the exchange member office), no direct access is permitted. Trading must be done placing orders to members who canalize them to the market central order book.

d) Non clearing members must have a contract with a clearing member who will clear the contracts traded by the former. The clearing member becomes subsidiary for all the positions on behalf of the non-clearing member.

e) Rules governing the specific persons who may enter orders are designed by the exchanges and reviewed by the CNMV.

f) Operators and clearing operators are registered at the exchange and pass a competency exam about exchange rules and trading system.

UNITED KINGDOM

The FSA does not prescribe what classes or types of membership an exchange may have. However, the exchange needs to satisfy the FSA that its arrangements are compatible with its obligation to ensure the

orderly conduct of business. The FSA also expects an exchange to treat all members of the same class or grouping on an equal basis.

The FSA's primary concern in respect of its oversight of exchange access is with an exchange's arrangements with those whom it has granted direct access. It is these members/participants who are held to be responsible for the input of orders and, hence for compliance with exchange rules and the honouring of executed transactions. Regulatory assessment of a member's arrangements for granting its clients indirect electronic access to an exchange are primarily the responsibility of the firm's regulator.

Regulatory authorisation: Exchanges operating screen-based systems are not required to restrict membership to authorised persons only – though, in practice, nearly all members are authorised, whether in the UK or in their home state. Where an exchange admits non-authorised persons, it will need to take responsibility for some of the controls over members for which it might otherwise rely on the prudential and/or conduct of business regulator. (N.B. Authorisation remains a requirement for pit trading.)

Access categorisation: Direct access is, in effect, available only to members. An exchange may classify different classes of members in different ways (e.g some may be called participants.)

Access criteria: Direct access is granted to exchange members only. If members provide clients with facilities which enable them to enter orders on an exchange's order book, the broker remains responsible for the order entry and appropriate controls over the entry of such orders.

Financial integrity: any person entering orders into the system must either be a clearing member or have approved arrangements with a clearing member.

Operational standards: exchanges are expected to impose access requirements on members (e.g. control of access, passwords etc) designed to ensure the orderliness of their market. However, no access controls are foolproof and the onus remains on the exchange to monitor its market continuously for signs of disorderliness.

User competency: Exchange rules are expected to require members to give access to terminals only to those with appropriate qualifications and competence.

UNITED STATES – CFTC

(a) The rules specifying who may access the system are designed by the exchange and presented by the exchange for CFTC approval. In general, other than seeking to ensure that access is fair, the CFTC's specific approach depends on the type of access specified by the exchange rule.

Customers: The CFTC does not restrict or otherwise impose standards on the type of customer who may transmit orders (via electronic order routing systems or otherwise) to an intermediary for execution on an electronic system. However, the CFTC may impose standards specifically applicable to such systems.

Direct access: Persons who may enter orders directly for execution (i.e., unintermediated access to trade matching): The CFTC does not impose standards on persons authorized by an exchange to trade solely for their own account. Section 4e of the CEA requires any person who enters discretionary orders for another person for futures into an electronic system on or subject to the rules of a contract market to register as a floor broker. Alternatively, such person can be registered as an associated person (AP).

Intermediaries: Any person who solicits or accepts orders for execution of futures transactions and accepts funds is required to be registered with the CFTC through National Futures Association (NFA) as a futures commission merchant (FCM). Among other things, FCMs are

subject to capital requirements that are related to the amount of customer margin funds they carry and to requirements that customer funds be segregated from non-customer funds. The sales personnel who solicit or accept orders from the public, or who supervise such persons, must register as APs. Personnel who accept instructions to input orders on a system and limit their activities to clerical duties generally are not required to register under the CEA. (sec. 4k(1) of the CEA).

(b) Exchange rules specifying who may become a member and trade directly on the system are reviewed for fairness of access (i.e., all persons within a particular category should be treated the same). As noted above, the CFTC does not impose standards for membership. Exchanges, therefore, may create membership categories which provide access to electronic systems for minimal cost.

(c) Customer orders must be placed through an intermediary (FCM) or floor broker. Currently, FCMs are subject to exchange, National Futures Association (NFA) and CFTC financial integrity rules (e.g., minimum capital and customer funds requirements), and must supervise APs who deal with customers. [Note: rules are coordinated so that essentially the highest capital rule applies.] Depending upon the contract, either the CFTC and/or the exchange imposes speculative position limits. Some exchanges impose capital-based position limits. With respect to computer-to-computer interface arrangements whereby clearing members accept customer orders via an order-routing system and then transmit the orders for automated trading systems, the CFTC has been consistent in requiring that either (i) the clearing member's order routing system contain automated credit controls or position limits or (ii) the clearing member have an employee manually check the incoming customer order and approve the order before it directly enters the automated trading system for matching.

(d) As noted above, only intermediaries may enter orders for customers directly into the trade matching system. All FCMs are subject to capital requirements both of the CFTC, NFA and the relevant exchange, and are subject to financial integrity requirements and oversight by the exchange, CFTC and NFA. Exchange rules typically require higher capital requirements for clearing members (i.e., members who carry open positions). Some non-clearing member firms may not be subject to capital requirements because they are not registered as FCMs.

(e) Rules governing the specific persons who may input orders are designed in the first instance by the exchange and are reviewed by the CFTC primarily for fairness. An FCM and its APs must operate out of an FCM's office or a branch office where the AP is supervised.

(f) IOSCO Principle 6 is applied to ensure that procedures are in place to ensure: (1) the competency, integrity and authority of system users; (2) that system users are adequately supervised and (3) that access to the system is not arbitrarily or discriminatorily denied.

UNITED STATES – SEC

a) Only registered broker-dealers may be members of a national securities exchange.

b) Exchanges are required to have rules to admit members and persons associated with members. See Section 6 of the Exchange Act. Non-members may access an exchange through a member.

c) and d) Orders must be routed through an exchange member. Broker-dealers are subject to financial responsibility rules. See Exchange Act Rules 15c1-1 and 15c1-3. Clearing membership and other requirements for exchange members generally is done at the exchange level pursuant to self-regulatory organization ("SRO") rules.

e) and f) Regulation is done primarily at the exchange level pursuant to SRO responsibilities. The exchanges have rules addressing the conduct of members and persons associated with members on the trading floor and in offices, as well as rules providing for the training of members and associated persons.

ARGENTINA

As mentioned in answer 1 above, at the moment there are no CNV rules or regulations specifically regarding the categories of persons who may “access” the screen-based system.

As a general rule, futures market rules specifying who may become a member and trade directly on the system, are reviewed for fairness of access (i.e., all persons within a particular category should be treated the same).

As noted above, CNV has no explicit requirements for obtaining access as a member, other permittees system participant, client or intermediary.

- a) The rules specifying who may access the system are designed by the market and presented by the market for CNV approval. The CNV does not restrict or otherwise impose standards on the type of customer who may transmit orders (via electronic order routing systems or otherwise) to an intermediary for execution on an electronic system. The CNV does not impose standards on persons authorized by a market to trade solely for their own account. Among other things, intermediaries are subject to capital requirements.
- b) Futures Markets rules specifying who may become a member and trade directly on the system are reviewed for fairness of access (i.e., all persons within a particular category should be treated the same). As noted above, the CNV does not impose standards for membership. Futures Markets, therefore, may create membership categories which provide access to electronic systems for minimal cost.
- c) Customer orders must be placed through an intermediary.
- d) As noted above, only intermediaries may enter orders for customers directly into the trade matching system. They are subject to markets rules regarding financial integrity requirements and they are oversight by the market acting as SRO. At the moment there are no clearing members as there is no clearing house in place.
- e) Rules governing the specific persons who may input orders are designed in the first instance by the market and are reviewed by the CNV primarily for fairness.
- f) There must be procedures in place to ensure: (1) the competency, integrity and authority of system users; (2) that system users are adequately supervised and (3) that access to the system is not arbitrarily or discriminatorily denied.

BRAZIL

Exchanges present their regulations and CVM reviews and approves the rules proposed. Authority focus on self-regulation mechanisms to promote fair access. Brokers are responsible for orders transmitted from their terminals. Each broker firm have a limited number of terminals. Brokers may place terminals available to customers. CVM doesn't restrict the type of customers who may transmit orders. Few routing systems are established in the Brazilian markets but brokers are also responsible for these orders. User financial capacity is also under exchanges responsibility.

JAPAN – MITI/MAFF

- a) Exchange rules specify the obligation of the members who are allowed to access both the trading and clearing systems. The exchange must submit these rules to MAFF or MITI for authorization.
- b) Exchange rules specifying who may become a member are examined for fairness of access. As noted in the answer to a), direct access to the trading system is limited to exchange members only.
- c) Customer orders must go through FCMs. FCMs must have enough knowledge and experience to solicit and accept orders fairly as well as accurately. Since current system does not have automated

monitoring functions, FCMs are required to monitor trading and associated financial integrity controls through the use of human intervention.

- d) All exchange members are subject to financial integrity requirements and oversight both by the MAFF or MITI and by the exchanges. Financial integrity standards such as minimum capital requirement, position limits, maximum price fluctuation limits and margins are specified by the exchange rules. In addition, direct linkage between trading and clearing systems can ease financial risks.
- e) There are no specific requirements for members in respect to who may input orders as long as that person is employed by the member. MAFF or MITI will approve installation of order entry terminals by notice bases if they are located at member's offices or branches within Japan.
- f) Member firms must restrict access to authorized personnel who masters the use of the terminals.

MALAYSIA

There are two categories of persons who are authorised to have access to the trading system:-

- Futures Broker Representative (FBR)
- Local Member

FBR

- Person licensed to trade in futures contract.
- Can solicit, advise, accept and execute clients' orders, etc.

Local Member

- Persons who are registered with the Exchange to trade solely for his own account.
- Cannot trade on behalf of clients.

The Exchange will assign a user ID to the above authorised persons to enable them to gain access to the trading system. Additionally, a Security Coordinator must be appointed by the Trading Member to oversee or supervise the access level.

In order to be authorised to trade, they must satisfy the following requirements :-

- Meet the licensing requirement as laid down by the Securities Commission.
- Have to pass the Malaysian Futures and Options Registered Representative (MFORR) exam.
- Attend training provided by the Exchange on the trading system.

It is also a requirement by the Exchange and Securities Commission that the following segregation be observed :-

- Dealing room and backoffice area are physically segregated with security access.
- Functions of proprietary FBR and FBR who trades on behalf of clients are properly segregated.

All Trading Members will have to pay Exchange membership fee to KLOFFE, whilst all Clearing Members will have to subscribe to the Clearing House membership.

SINGAPORE

(a) Subject to MAS approval of its rules, an approved Futures Exchange determines who may access its screen-based system. However, intermediaries that carry on the business of soliciting or accepting orders for futures contracts must be licensed as futures brokers and be SIMEX corporate members. Broking licenses may be granted only to corporations by MAS upon satisfaction of certain prescribed conditions, including fit and proper criteria on the part of the applicant, its directors, officers, employees and substantial shareholders. Such brokers must have shareholders funds of at least S\$5 million. Employees or those acting for or by arrangement with a futures broker have to be licensed as futures broker's

representatives. Regulation 27 of the Futures Trading Regulations (FTR) also requires the exchange to register any person who trades for another person or for his own account using an electronic system provided by the exchange.

(b) At present, all SIMEX corporate members broking for third parties are licensed futures brokers. However, there exists a group of individual non-clearing members. Rule 1107 of SIMEX Rules provides that a member shall be entitled to one terminal for the sole purpose of carrying out or effecting trades on the exchange, although clearing members may apply for more terminals. Non-clearing members have to apply for a terminal through a clearing member who shall have agreed to clear such member's transactions through the automated trading system.

(c) Customers must place their orders through brokers who by virtue of their membership of SIMEX are subject to exchange rules. Position limits in respect of any futures contract are determined by SIMEX based on criteria set by the exchange with the approval of MAS: see regulation 16 FTR.

(d) Trades must be entered through licensed brokers who are subject to adjusted net capital requirements, account and audit requirements and conduct of business rules such as the segregation of customer's funds. MAS may also give directions to such brokers: see section 49 FTA. In addition, MAS may require such brokers to produce records in connection with their business: see section 43 FTA.

(e) Such rules are generally set by the exchange and reviewed by MAS. For example, rule 1107 of SIMEX Rules states that no person shall have access to a terminal unless he is duly registered as a Terminal Operator, and the rules that apply to Floor Brokers apply to such Terminal Operators. Rule 1104 states that all transactions on an approved electronic trading system shall be carried out or effected at and on the registered office address of the exchange member.

(f) Such rules are generally set by the exchange and reviewed by MAS. In the case of corporate members of the exchange, their Terminal Operators also have to be licensed as futures broker's representatives. Section 14 FTA prescribes fit and proper criteria for such representatives, who must also satisfy the MAS of their educational or other qualification or experience.

13. Does your approach differ depending upon the technical nature of access or connection? For example:

- Access through vendors
- Closed end system involving dedicated terminals
- Systems permitting access through personal computers
- Broker-provided “order routing” systems that direct orders into the screen-based system Internet

The majority of jurisdictions report no differences in approach based on technical nature of access. Presumably, the IOSCO Principles would be flexibly applied.

[3] jurisdictions report differing approaches based on technical nature of access [Australia, Canada – Ontario and Quebec]. *See also* the UK.

[3] jurisdictions note, however, that to date they have only addressed dedicated systems. [Italy, CFTC, Brazil].

AUSTRALIA

ASIC considers that different methods of access will affect the level of protection for trading on the market. ASIC requires additional protections in Business Rules where open interface systems are used and where clients have access to automated order routing systems.

CANADA – ONTARIO

Yes our approach would differ depending upon what the access is to and how or through whom access is granted.

CANADA-QUEBEC

Yes – our approach would differ depending upon what the access is to and how or through whom access is granted.

FRANCE

See answer for order routing system approach.

GERMANY

No.

HONG KONG

No.

ITALY

Until now, only exchange electronic trading systems have been reviewed.

JAPAN – MOF

No. To date, existing exchange systems may be connected to member's terminal or with member's system via dedicated line. There is no different restrictions on each connection.

THE NETHERLANDS

Not applicable (see question 11).

SPAIN

No

UNITED KINGDOM

Where linkage is achieved other than through the exchange's own terminals, the exchange's ability to ensure the orderly conduct of business is likely to be regarded as potentially more at risk. In these circumstances, the FSA would want to be satisfied that an exchange had undertaken greater due diligence on security issues and that its contractual arrangements were appropriate.

UNITED STATES – CFTC

To date, the systems reviewed by the CFTC have involved dedicated systems. See answer to 12 (c) for order routing systems approach. The CFTC currently is reviewing an Internet-based access electronic system (FutureCom)

UNITED STATES – SEC

No.

ARGENTINA

At the moment there are no laws, rules or regulations specifically addressing electronic screen-based trading systems; thus, there are no specific criteria differing upon the technical nature of access or connection.

BRAZIL

The systems reviewed by CVM are dedicated systems. São Paulo Stock Exchange (BOVESPA) has recently launched a home broker system in which investors can place orders through the internet, via a brokerage house, to the Exchange ETS. After a successful initial testing period in which CVM made on site visits to the brokers, knowing each ones' system (customers' orders will be analysed by the broker system in which he is registered, before transmitted to BOVESPA ETS) the home-broker is now operating normally. CVM is also working together with BOVESPA in order to keep a strong enforcement effort over internet trading. No particular legislation were set since internet trading in Brazil is considered just another way to communicate orders to the stock exchange.

JAPAN- MITI/MAFF

No. To date, existing exchange system is closed-end system involving dedicated terminals only.

MALAYSIA

N/A

SINGAPORE

We apply the same broad principles for approval and access to all electronic trading systems.

14. Do you have any specific requirements for electronic systems admitting remote members (i.e., members located outside of your jurisdiction)? If so, please describe.

The majority permit remote membership and impose no special requirements.

See Germany which reports special requirements.

Brazil does not permit remote members. Japan does not have a category of remote members.

Singapore reports that SIMEX to date has not admitted remote members but would apply national treatment.

AUSTRALIA

No.

CANADA – ONTARIO

Currently, there are no specific requirements.

FRANCE

For registration and authorization of such remote members, see above.

GERMANY

Yes. In general, the same rules apply for domestic and remote members. There are some specifics with regard to remote members: The members must be regulated in their home country. They must ensure that all installations operated outside the Federal Republic of Germany or Switzerland (user devices, input devices, etc.), as well as the activities of such members may be subject to inspection.

HONG KONG

No. There is no remote member category yet.

ITALY

No. Exchanges may provide remote members facilities. Under the ECC directive and the Leg. Decree 58/98, any European intermediary may provide financial services without establishing branches, provided that Consob and the Bank of Italy have been informed by the competent authority.

JAPAN - MOF

No. There is no category of remote members.

THE NETHERLANDS

Not applicable (see question 11).

SPAIN

So far just MEFF RF allows remote trading screens (that is, screens located in a different place than the member office). Since remote screens are considered as a member's client account, members are subsidiary for all the transactions carried out.

UNITED KINGDOM

There are no explicit requirements. We would expect an exchange to pay particular attention to the following:

- its ability to enforce its rules;
- its ability to be aware of the financial condition of the member;
- its ability to enforce performance of contract/default rules;

- whether or not the member is regulated in its home jurisdiction and whether satisfactory arrangements for regulatory co-operation with that jurisdiction.

UNITED STATES – CFTC

No. Exchanges may, however, require such a foreign member to maintain an office in the United States. In general, “national treatment” is extended.

UNITED STATES – SEC

No. However, as noted above, members of exchanges are required to be U.S. registered broker-dealers.

ARGENTINA

No. Futures Markets may require such a foreign member to maintain an office in Argentina.

BRAZIL

Foreign members are not allowed to operate in the Brazilian system. Trading is made through national branches.

JAPAN – MITI/MAFF

No. There is no category of remote members as such.

MALAYSIA

No.

SINGAPORE

No. SIMEX has not, to date, admitted any remote members. While foreign firms are required to obtain broking licenses here, “national treatment” is accorded to them. Many of SIMEX's corporate members are well-reputed international companies with a global network. Today, the position of SIMEX as an international market place is well recognised, with almost 80% of its customer trades coming from the U.S., Europe, Japan and other countries.

15. Do you (or any other authority in your jurisdiction) place any restriction on a foreign (located) member of a domestic market having direct access to the domestic screen-based trading system ? If so, please explain the rationale.

The majority report no restrictions on direct access by remote members.

Malaysia has not yet permitted remote membership.

AUSTRALIA

No.

CANADA – ONTARIO

Currently, there are no restrictions placed on a foreign member of a domestic market having access to a domestic screen based trading system.

CANADA-QUEBEC

Currently, there are no restrictions placed on a foreign member of a domestic market having access to a domestic screen based trading system.

FRANCE

Provided they are duly authorized by their domestic competent authorities or, where applicable, by the CMF, no.

GERMANY

No.

HONG KONG

As above [i.e., #14: Yes. Remote members are required to maintain adequate clearing arrangements.]

ITALY

No, provided that they are authorized.

JAPAN – MOF

No. Exchange members are required to have a branch in Japan by rules of exchanges approved by the MOF and the FSA.

THE NETHERLANDS

Not applicable (see question 11).

SPAIN

No

UNITED KINGDOM

No.

UNITED STATES – CFTC

No.

UNITED STATES – SEC

See 14 above [i.e., #14: No. However, as noted above, members of exchanges are required to be U.S. registered broker-dealers.]

ARGENTINA

No.

BRAZIL

No. [see #14: Foreign members are not allowed to operate in the Brazilian system. Trading is made through national branches.]

JAPAN – MITI/MAFF

No. Foreign members who wish to solicit orders from domestic customers are required to maintain an office in Japan.

MALAYSIA

To date, no direct access to the domestic screen-based trading system has been allowed.

SINGAPORE

No. Please see response to question 14. [#14: No. SIMEX has not, to date, admitted any remote members. While foreign firms are required to obtain broking licenses here, “national treatment” is accorded to them. Many of SIMEX's corporate members are well-reputed international companies with a global network. Today, the position of SIMEX as an international market place is well recognised, with almost 80% of its customer trades coming from the U.S., Europe, Japan and other countries.

16. Do you have rules that address or require liquidity providers such as market makers? If so, please provide details. Please discuss whether your regulations impose any affirmative obligations on such liquidity providers (e.g., to make a market at a particular spread or quantity)?

All jurisdictions permit market makers or other liquidity providers.

All jurisdictions report that substantive regulation is imposed at the exchange level, with exchange rules reviewed and/or approved by the regulator.

Two jurisdictions have some requirements at the regulator level for liquidity providers: the US SEC and Brazil.

AUSTRALIA

There are no statutory legislative requirements in authorisation procedures or ongoing approvals for exchanges to ensure that there are liquidity providers in their markets. However some exchanges have rules that allow for market makers. Not all contracts or options series will have a market maker, some will have more than one. The exchanges use their best endeavours to encourage a market maker for every contract and series.

For example, SFE rule TE2.12:

Market Makers shall within the relevant pit make a market on demand at spreads and for the number of lots as determined by the Board from time to time for each futures and options contract determined by the Board.[Extracted from SFE Business Rules, FLOOR TRADING ETIQUETTE.]

For example, ASX Business Rule 7.6.1.1:

A market maker must make markets in the period for obligations in Classes assigned to the market maker. The exchange will prescribe a minimum quantity and a maximum spread, for the Series in which a market maker must make a market.

CANADA – ONTARIO

Exchange rules providing for liquidity providers such as market makers are required to be reviewed by the Commission. The rules are reviewed to ensure fairness and to ensure that the rule is not anti-competitive.

CANADA-QUEBEC

Exchange rules providing for liquidity providers such as market makers are required to be reviewed by the CVMQ. The rules are reviewed to ensure fairness and to ensure that the rule is not anti-competitive.

FRANCE

Exchanges rules may (and actually do on the MONEP and on the MATIF) provide for liquidity providers such as market makers. They are reviewed by the CMF and the COB in the course of the review of the exchange rules.

GERMANY

See Part 1c. Market Makers take profit of reduced transaction costs. Their rights and duties are addressed by the Exchange Rules.

HONG KONG

See 14.

ITALY

Exchange rules providing for liquidity providers such as market makers are required to be reviewed by the Consob. Such rules are reviewed to ensure that trading remains “open and competitive,” and does not foster fictitious or wash trading.

JAPAN – MOF

No.

THE NETHERLANDS

N/A

SPAIN

Exchange rules providing for liquidity providers such as market makers are required to be reviewed by the CNMV. Such rules are reviewed to ensure that trading remains “open and competitive”. Depending on the type of contract, market makers must maintain a certain volume of bid and offer orders within a predetermined spread and for a % of trading session. As a compensation for liquidity providers, market makers obtain discount fees when meeting certain trading volumes.

UNITED KINGDOM

There is no requirement of an exchange to make any provision for formal liquidity provision. Exchanges that establish specific arrangements for liquidity providers must ensure that these arrangements are consistent with the recognition criteria.

UNITED STATES – CFTC

Exchange rules providing for liquidity providers such as market makers are required to be reviewed by the CFTC. Such rules are reviewed to ensure that trading remains “open and competitive,” and does not foster fictitious or wash trading. Currently, there are such provisions at U.S. contract markets.

UNITED STATES – SEC

Yes. However, specialists and market makers are largely regulated at the exchange level. The Commission does not have rules requiring exchange specialists or market makers, but does have certain rules addressing their activities. For example, Rule 11Ac1-1 (“Display Rule”) requires the display of customer limit orders priced better than a specialist’s or over-the-counter market maker’s quote or that add to the size associated with such quote. Rule 11Ac1-4 (“Quote Rule”) requires a market maker to publish quotations for any listed security when it is responsible for more than 1% of the aggregate trading volume for that security and to make publicly available any superior prices that a market maker privately quotes through certain electronic communications networks (“ECNs”). See Exchange Act Rules 11Ac1-1

and 11Ac1-4 (“Order Handling Rules”). See also Securities Exchange Act Release No. 37619A (Sept. 6, 1996), 61 FR 48290 (Sept. 12, 1996).

ARGENTINA

No. Futures Markets rules providing for liquidity providers such as market makers are required to be reviewed by the CNV.

BRAZIL

Yes. Dealers systems are required, through CVM Rule N° 243 to operate through market makers. Rules regarding market makers are established by the organized entity and approved by CVM.

JAPAN –MITI/MAFF

No. The MAFF or MITI does not have any rules addressing liquidity providers. However, the exchange provides the market maker system for the options market and imposes obligations on such market makers to make a market at a particular spread or quantity.

MALAYSIA

The market makers have certain terms and conditions where they are supposed to adhere at all times during the contract. However, these conditions are not in the Exchange Business Rules.

SINGAPORE

There are no specific statutes or regulation.

Trading process

17. Do you examine and/or approve the system’s order execution algorithm (i.e., the set of rules governing the processing, including prioritization, and execution of orders entered into a screen-based system). If so, please describe topics examined and note any explicit requirements.

All jurisdictions examine the order algorithm.

IOSCO Principle 3 is generally applied.

AUSTRALIA

ASIC examines order algorithms as part of any approval recommendation for a market authorisation. ASIC considers such issues as transparency, equality of treatment, efficiency, risk of manipulation and robustness of algorithms. ASIC reviews the ongoing operation of an exchange's algorithm on a for cause basis. ASIC expects exchanges to discuss any issues, problems or proposed changes to an algorithm.

There are no explicit regulatory requirements.

CANADA – ONTARIO

In Ontario, the order execution algorithm is filed for informational purposes only.

CANADA-QUEBEC

In Quebec, the order execution algorithm is filed for informational purposes only.

FRANCE

Yes. However there are no specific rules or standard providing explicit requirements to be met by the system's order execution algorithm. This is dealt with under the general principles of fair treatment of investors and transparency and under IOSCO Principles 3.

GERMANY

The Exchange Act does not specify a particular method for the execution of futures and options transactions. However, the Exchange Rules which specify the trading algorithm are approved by the State Exchange Supervisory Authority. IOSCO Principle No. 3 applies.

HONG KONG

a) Yes. The system's order execution algorithm is examined and approved by the SFC. The topics required for examination are specified in the SEHK Rules and HKFE Rules. Price/ time priority and spread requirements must be met.

ITALY

Yes. Order matching criteria should be clearly mentioned in market rules. They are specifically reviewed by Consob to ensure that orders are matched only on price and time priority basis, without any other priority given to specific persons. Cross-orders (i.e. buy and selling orders input by the same intermediary or pre-arranged transactions) must be executed between the current bid and offer prices.

JAPAN - MOF

Yes. However, neither the SEL nor the FFTL mandates a particular method for the execution of derivatives transactions. The rules and operation of the system algorithm are examined by the MOF for consistency with: the article 106-2 of the SEL or the article 34-2 of the FFTL (require exchanges to operate their markets in such a way as to insure the fairness of, and facilitate, trading and contribute to the protection of investors); and IOSCO Principles 3 (the system sponsor should be able to describe the order execution system algorithm used by the system (i.e., the set of rules governing the types of permitted orders (e.g., legality, price) and the processing, including prioritization, and execution of orders).

THE NETHERLANDS

N/A

SPAIN

Yes. The exchange rules include the order matching priority criteria and the order execution algorithm must provide the highest transparency. Orders are matched following strict price time criteria. Combined orders (those that require simultaneous purchases and/or sales) shall have priority over standard orders at the same price shall be executed irrespective of the time that the order has been standing.

UNITED KINGDOM

The FSA considers an exchange's order execution algorithm with a view to ensuring that the method of execution is consistent with the orderly conduct of business and the proper protection of investors. Algorithms may vary according to such factors as instrument and market user, but the FSA will look to an exchange to justify anything beyond simple price and time priority.

UNITED STATES – CFTC

Yes. However, neither the CEA nor CFTC rules mandate a particular method for the execution of futures transactions. CFTC rule 1.38 requires open and competitive execution of orders and the operation of the system algorithm is examined for consistency with rule 1.38. For this purpose, the CFTC applies IOSCO Principle 3: the system sponsor should be able to describe the order execution algorithm used by the system (i.e., the set of rules governing the types of permitted orders (e.g., market, limit, stops) and the

processing, including prioritization, and execution of orders). In general, the system rules governing the algorithm in all of its details is examined to ensure an “open and competitive” system. This generally includes considerations of the system’s transparency (e.g., availability of information regarding current orders and transactions) and the degree to which orders are given a fair opportunity to obtain execution.

UNITED STATES – SEC

Exchanges are required to have trading rules, including rules regarding processing, prioritization, and execution. Pursuant to Section 19 of the Exchange Act, these rules must be filed with and approved by the Commission.

ARGENTINA

At the moment there are no laws, rules or regulations specifically addressing electronic screen-based trading systems. CNV regulations do not mandate a particular method for the execution of futures transactions. Thus, this item is examined when futures markets submit their rules regarding the implementation of screen trading systems. In general, the system rules governing the algorithm in all of its details is examined to ensure an “open and competitive” system. This generally includes considerations of the system’s transparency (e.g., availability of information regarding current orders and transactions) and the degree to which orders are given a fair opportunity to obtain execution.

BRAZIL

CVM requires systems’ sponsors to clearly describe the order execution algorithm used by the system of permitted orders and the processing, including prioritization and execution of orders. The rules applied to the system are reviewed by CVM to assure transparency and fairness. CVM does not run regular IT auditing on the exchange system.

JAPAN –MITI/MAFF

Yes. However, Commodity Exchange Law does not mandate a particular method for the execution of either futures or options transactions. First, the exchange staff reviews the system’s order execution algorithm. To grant authorization, MAFF or MITI will review the results based on analysis submitted by the exchange.

MALAYSIA

KLOFFE’s systems were adopted from other existing systems.

SINGAPORE

SIMEX’s automated trading system incorporates an order matching system based upon the use of a matching algorithm reflecting strict price/time priority for all orders entered into the system. The system is fully integrated with all current SIMEX operations. SIMEX Rules, including those relating to trading practices, prioritisation, and execution of orders, are reviewed by MAS. SIMEX Rules provide that all Rules relating to general trading standards and practices shall, as applicable, apply *mutatis mutandis* to all orders executed through the automated trading system. These rules, in general, ensure that the system’s order execution algorithms are fair, open and competitive.

18. Do you examine and/or approve the degree of system transparency (*i.e.*, the extent to which and timeliness by which relevant information is available in the system about open or unexecuted orders and completed transactions is available, including to third-party providers or over the Internet)? If so, please describe the topics examined and note any explicit regulatory requirements.

All jurisdictions examine transparency consistent with IOSCO Principle 2.

AUSTRALIA

There are no explicit regulatory requirements.

CANADA – ONTARIO

In Ontario, in connection with the proposed regulatory framework for ATSS, it is proposed that all exchanges and ATSS that display orders provide both pre-trade and post trade information to the “data consolidator” in real-time (the data consolidator will be the person or company chosen by the Canadian Securities Administrators to consolidate pre-trade and post-trade information).

CANADA-QUEBEC

In Quebec, in connection with the proposed regulatory framework for ATSS, it is proposed that all exchanges and ATSS that display orders provide both pre-trade and post trade information to the “data consolidator” in real-time (the data consolidator will be the person or company chosen by the Canadian Securities Administrators to consolidate pre-trade and post-trade information).

FRANCE

Yes. IOSCO Principles 2 is applied. Exchange rules are reviewed to ensure that they provide equitable availability of accurate and timely trade and quotation information to all equally situated system participants. Nor the CMF nor the COB regulate the terms under which exchanges provide price and trade data to third party vendors.

GERMANY

Yes. The Exchange Act requires a high degree of pre-trade transparency. The same is true for post-trade transparency: Prices and volumes have to be published immediately to the market by vendors. IOSCO Principle No. 2 applies. No regulation with regard to provide data to vendors.

HONG KONG

Yes. The system’s transparency is both examined and approved by the SFC. The topics that must be examined are stated in the SEHK Rules and HKFE Rules. They include price/quantity transacted and bid/offer spreads.

ITALY

Yes. Market rules must provide the highest transparency . Orders and contracts information must be promptly disclosed within the market and to the public. In general, Consob has not regulated the terms under which exchanges provide price and trade data to third party vendors.

JAPAN – MOF

Yes. IOSCO Principle 2 is applied. Exchange rules are reviewed to ensure that they provide equitable availability of accurate and timely trade and quotation information to all equally situated system participants. For this purpose the exchange must describe the processing, prioritization and display of quotations within the system. Exchanges are required to make price and trade data public each day under the SEL or the FFTL.

THE NETHERLANDS

N/A

SPAIN

Yes IOSCO Principle 2 is applied. Trading systems are designed to ensure the equitable availability of accurate and timely trade and quotation information to all system participants. Orders and contracts information is disclosed immediately to members and to the public. In general, the CNMV does not regulate the terms under which exchanges provide price and trade data to third party vendors. In a general sense, it could be said that exchanges provide to vendors all the prices and volumes information available on trading screens without delay.

UNITED KINGDOM

The FSA expects exchanges to provide sufficient pre and post trade transparency to support reliable price formation. An exchange is expected to have arrangements which deliver this information on an equitable basis to all market members. While supporting the principle of maximising transparency, the FSA recognises that in certain circumstances an exchange may be able to justify different approaches to transparency for certain classes of business, e.g. very large trades. The FSA views the sale of price and trade data to third parties as a commercial matter for exchanges, subject principally to considerations of competition policy.

UNITED STATES – CFTC

Yes. IOSCO Principle 2 is applied. Exchange rules are reviewed to ensure that they provide equitable availability of accurate and timely trade and quotation information to all equally situated system participants. For this purpose the exchange must describe the processing, prioritization and display of quotations within the system. In general, the CFTC has not regulated the terms under which exchanges provide price and trade data to third party vendors.

UNITED STATES – SEC

Yes. National securities exchanges are expected to participate in the National Market System. They are expected to participate in the market-wide transaction and quotation reporting plans that provide for the transparent, efficient, and fair operation of the securities markets. As noted above, the rules of national securities exchanges must be filed with and approved by the Commission.

ARGENTINA

At the moment there are no laws, rules or regulations specifically addressing electronic screen-based trading systems.

Thus, this item is examined when futures markets submit their rules regarding the implementation of screen trading systems. For this purpose the market must describe the processing, prioritization and display of quotations within the system.

BRAZIL

Regulation requires that exchanges and systems managers may disclose equitable, accurate, and timely information. This requirement is very important, and, if not properly attended may disqualify an organization. To date Brazilian exchanges and systems are running with very transparent systems. CVM also has access to all real time quotations and information from market participants.

JAPAN – MITI/MAFF

Yes. Exchange rules are reviewed to ensure that they provide equitable availability of accurate and timely trade and quotation information to all members. For this purpose the exchange must describe the processing, prioritization and display of quotation within the system.

MALAYSIA

N/A

SINGAPORE

SIMEX when developing its automated trading system has included enquiry features that would provide information on open orders and completed transactions. The degree of transparency would be taken into consideration when approving an electronic trading terminal.

MAS has not regulated the terms under which SIMEX provides trade data to information vendors for dissemination.

19. Do you examine the technical aspects of order routing systems? If so, please describe briefly and note any explicit requirements.

The majority of jurisdictions report that order routing systems would be reviewed as part of the overall review of a system.

Canada – Ontario and Quebec currently require registration of order routing systems.

Italy and Spain report requiring of “filter;” CFTC requires automated credit or position limit filter or human checks prior to entry of order.

AUSTRALIA

There are no explicit regulatory requirements.

CANADA – ONTARIO

Ontario requires that an order routing system register with the Commission if it is a separate system. If the order routing system is otherwise part of a system, it would be reviewed as part of the overall review of the system.

CANADA-QUEBEC

Quebec requires that an order routing system register with the Commission if it is a separate system. If the order routing system is otherwise part of a system, it would be reviewed as part of the overall review of the system.

FRANCE

See answer to question 2 above.

[#2. Yes. The 1990 IOSCO Principles for the oversight of screen based trading systems

In addition in 1994, the Commission issued a list of principles related to electronic order routing systems. These principles apply :

to the end user or the order routing system (the client using such an order routing system must commit itself to grant access to the systems only to authorized persons whose identity have been disclosed to the trading member, the client must acknowledge that he/she is aware of the rules and codes of conduct of the market on which he/she wants to place orders ; in order to prevent order routing terminals from being disseminated anywhere, an agreement must be signed between the client and the trading member whereby the client acknowledges that the market operator may conduct on site]

GERMANY

Yes. The requirements are laid down in the Exchange Rules which are approved by the State Exchange Supervisory Authority.

The admission of a member requires that the technical conditions for connection to the EDP system of the exchange are complied with.

If the Board of Management of the exchange permits a member to use order routing systems to input orders in accordance with the Technical Implementation Regulations, such a member shall be responsible for ensuring that the order routing facility is used properly, for the designated purpose and in accordance with the provisions of Exchange Act. This also applies to any orders which are entered into the trading system via order routing by third parties who are not admitted to the exchange. Should the member fail to comply with these requirements, the Board of Management of the exchange shall restrict or revoke the permission to use an order routing system.

HONG KONG

Yes, the technical aspects of order routing are examined. These aspects include time-stamping, record keeping, audit trail requirements

(Codes of Conduct for respective exchanges/Internal Control Guidelines)

ITALY

Yes. Market rules must provide specific requirements for order routing systems, imposing that computer-to-computer interface arrangements must be under the complete control of the authorized intermediary through which orders flow. In particular the order routing system must provide automatic control devices on order price and quantity and on the frequency of orders and allow at any time the intermediary, upon request of the exchange, to prohibit orders to be sent. Furthermore, the intermediary must designate a person to the real-time control of order flow.

JAPAN-MOF

Yes. Although there is no case of order routing systems, to date, the MOF will require members to set a system that will reject customer orders violating the relevant law and/or the exchange rules (e.g., insider trading, market manipulation, price limits)

THE NETHERLANDS

N/A

SPAIN

With respect to MEFF RF remote trading screens, members must have a filter system to avoid mistakes in the transmission of the order to the market. The member proprietary and subsidiary of the remote screens have both control and the ability to close positions above pre-defined risk limits.

UNITED KINGDOM

The FSA requires to understand the architecture of member to exchange links, the safeguards put in place and the allocation of responsibilities as between exchange and member for the smooth operation of those links. In relation to broker to client links, the FSA requires firms to have adequate systems in place to control their credit exposure, as well as client agreements that make clear the parties' obligations and responsibilities for any electronic connectivity. Firms applying for authorisation must also submit an audited report on the quality of their systems.

UNITED STATES – CFTC

Yes. With respect to computer-to-computer interface arrangements whereby clearing members accept customer orders via an order-routing system, including the Internet, and then transmit the orders for automated trading systems, the CFTC has been consistent in requiring that either: (i) the clearing member's order routing system contain automated credit controls or position limits or (ii) the clearing member have an employee manually check the incoming customer order and approve the order before it is routed to the automated trading system for matching. In addition, the CFTC is likely to propose additional standards concerning the operation of those systems.

UNITED STATES – SEC

Exchanges are required to submit proposed rule changes to the Commission for approval, including those relating to order routing systems. In addition, exchanges comply with the Commission's Automation Review Policy guidelines. In this regard exchanges are expected to maintain adequate computer capacity, integrity and security to support the operation of the exchange including exchange order routing systems. There are also a number of unregulated entities that provide order routing services to allow securities firms and institutional investors to send orders and other messages to each other.

ARGENTINA

At the moment there are no laws, rules or regulations specifically addressing electronic screen-based trading systems.

Thus, this item is examined when futures markets submit their rules regarding the implementation of screen trading systems. For this purpose the market must describe the technical aspects of order routing systems.

BRAZIL

No, brokers are responsible for all orders. Clearing members do not accept customers orders. Internet orders are also subject to brokers approval and brokers are also responsible for these orders.

JAPAN - MITI/MAFF

Yes. However, there is no case of order routing systems, to date.

MALAYSIA

Requirements: fast, equivalent, secure, reliable access mechanisms, accuracy, application must be able to handle keyed and routed orders equally, auditable.

SINGAPORE

This issue is currently under review.

20. Do you examine the order handling and entry processes of the system (e.g., who can enter orders, waiting times, if any, types of orders accepted, (e.g., market or limit orders etc.) order allocation and modification procedures, trade confirmations etc.? If so, please describe topics examined and note any explicit requirements.

All jurisdictions report that they examine these matters as part of their general review of systems.
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AUSTRALIA

ASIC considers these matters as part of the general review.

CANADA – ONTARIO

If the system is recognized as an exchange, the Commission reviews rules dealing with order handling and entry processes. In the proposed regulatory framework for ATs, this area will be reviewed.

CANADA-QUEBEC

If the system is recognized as an exchange, the CVMQ reviews rules dealing with order handling and entry processes.

In the proposed regulatory framework for ATs, this area will be reviewed.

FRANCE

Yes. The CMF and the COB review the order handling and entry procedure as part of the review of the exchange rules to make sure that they comply with the Modernization of Financial Activities Act (registration requirements) and with the General Regulation of the CMF.

GERMANY

Yes. The requirements are laid down in the Exchange Rules which are approved by the State Exchange Supervisory Authority.

HONG KONG

Yes. The topics to be examined are outlined in the SEHK Rules and HKFE Rules. These include: Order sequence, order allocation, authorised user (Codes of Conduct/ Internal Control Guidelines)

ITALY

Yes.

JAPAN - MOF

Yes. The MOF reviews order handling and entry procedures to ensure that: (1) only members of the exchange may enter orders directly to the system; and (2) procedures of the members conform with the various requirements of the relevant law and the exchange rules (e.g., denial on orders violating law and/or the exchange rules, recordation).

THE NETHERLANDS

N/A

SPAIN

Yes. The market rules and regulations, which must be passed by the Ministry of Economy, include in art.11 the types of orders. In MEFF RF orders exceeding certain volumes must be confirmed via telephone before entering the central order book. The maximum volume of contracts is calculated depending on the capital adequacy of the member and the type of contract.

UNITED KINGDOM

The FSA reviews all aspects of the order handling process. Its principal objective is to ensure the equitable treatment of users, in particular in the prioritisation and allocation of orders.

UNITED STATES – CFTC

Yes. The CFTC reviews order handling and entry procedures to ensure that: (1) persons with such responsibilities are in compliance with relevant registration requirements (See Part 3 of CFTC's

regulations); and (2) such procedures conform with the various recordation requirements of CFTC Regulation 1.35.

UNITED STATES – SEC

Yes. Commission staff examine these processes to ensure that they comply with the Commission and SRO rules. See e.g., Exchange Act Rules 11Ac1-1 and 11Ac1-4.

ARGENTINA

At the moment there are no laws, rules or regulations specifically addressing electronic screen-based trading systems.

Thus, this item is examined when futures markets submit their rules regarding the implementation of screen trading systems. For this purpose the market must describe the order handling and entry processes of the system, order allocations and modifications procedures, trade confirmations, etc..

BRAZIL

CVM does not have any specific requirement on these topics. CVM examines exchanges and dealers systems regulations and approve them.

JAPAN – MITI/MAFF

Yes. The MAFF or MITI reviews order handling and entry procedure to ensure that: (1) only exchange members may enter orders directly to the system; and (2) procedure of the members conform with the various requirements of the relevant law and exchange rules.

MALAYSIA

These processes are automated. Therefore, KLOFFE does not examine the order handling and entry processes of the system.

SINGAPORE

Regulation 21 FTR requires a futures broker to establish and enforce internal procedures to ensure that that each order at or near the market price is transmitted to the electronic system before any order for the same futures contract for an account of the futures broker or a connected person or an account in which the broker is interested. In addition, regulation 17 FTR requires a futures broker to furnish its customers a written confirmation of each futures transaction within 2 business days of the transaction.

21. Do you have any requirements as to the length of the trading day or when trading on the system can occur?

None of the jurisdictions imposes any requirements on length of trading day. This is a matter determined by the exchange.

AUSTRALIA

No.

CANADA – ONTARIO

This will be reviewed in connection with the proposed regulatory framework for ATSS.

CANADA-QUEBEC

This will be reviewed in connection with the proposed regulatory framework for ATs.

FRANCE

No.

GERMANY

No. That is a decision of the Board of Management of the exchange.

HONG KONG

Yes. Length of trading day requirements are found in the Contract Specifications, and these may be found in the HKFE and SEHK Rules respectively.

ITALY

No. Consob does not have any express limitations on length of trading day or when trading can occur.

JAPAN -MOF

No. The MOF does not have any limitations on length of trading day or when trading can occur.

THE NETHERLANDS

N/A

SPAIN

No. The CNMV does not have any express limitations on length of trading day or when trading can occur.

UNITED KINGDOM

No. Exchanges are free to set their own trading hours. The FSA expects an exchange to maintain orderly trading whenever its facilities are open for trading. This may require different trading or access procedures for 'normal' and 'out hours' trading.

UNITED STATES – CFTC

No. The CFTC does not have any express limitations on length of trading day or when trading can occur. A critical consideration concerning the duration of a trading day is the adequacy of the related clearing and settlement cycle.

UNITED STATES – SEC

Trading must be done in accordance with the rules of the exchange. These rules are subject to review by the Commission and must be designed, in general, to protect investors and promote the integrity of the market.

ARGENTINA

No. The CNV does not have any express limitations on length of trading day or when trading can occur.

BRAZIL

No.

JAPAN – MITI/MAFF

No. The MAFF or MITI does not have any limitations on length of trading day or when trading can occur.

MALAYSIA

These requirements are currently in the business rules, and amendments to the business rules are subject to the Securities Commission's approval.

SINGAPORE

No. The exchange decides. For example, to better serve the needs of its international users, the exchange, in 1992, began the practice of keeping selected SIMEX products open for trading on Singapore public holidays that fall on days when the markets in other major economies are open.

22. Do you examine the opening and/or closing price procedures, if any? If so, please describe and note any explicit requirements.

The majority of jurisdictions report examining opening and/or closing price procedures as part of their overall review of rules submitted during the authorization process.

No explicit guidance is mentioned other than IOSCO Principle 3.

AUSTRALIA

ASIC reviews the opening and closing price procedures of any new applications as part of the authorisation process, and reviews the procedures for existing exchanges on a for cause basis. If the procedures are part of the business rules of the exchange, ASIC will review any proposed business rule changes. ASIC considers similar issues to those for algorithms. There are no explicit regulatory requirements.

CANADA – ONTARIO

Currently, if the system is recognized as an exchange, the Commission reviews rules in connection with opening and closing price procedures. In the proposed regulatory framework for ATSS, this area will be reviewed.

CANADA-QUEBEC

Currently, if the system is recognized as an exchange, the CVMQ reviews rules in connection with opening and closing price procedures.

In the proposed regulatory framework for ATSS, this area will be reviewed.

FRANCE

Yes. There are no explicit requirements although the COB would be very careful that the opening price procedure provide a fair representation of the balance of supply and demand without causing erratic price movement and, perhaps even more importantly, that the closing price procedure be such as to prevent price manipulation and erratic price movement to the larger extent possible. IOSCO Principle 3 applied.

GERMANY

The Market Supervision Board of the exchange monitors the whole order routing and trading process. It reports to the State Exchange Supervisory Authority.
IOSCO Principle 3 applies.

HONG KONG

Yes. Opening and closing procedures are outlined in the rules for the maintenance of fair and orderly markets and these may be found in the HKFE and SEHK Rules.

ITALY

Yes. Opening price algorithm is reviewed by Consob in order to ascertain it is adequate to ensure the orderly trading and a fair price formation process.

JAPAN - MOF

Yes. The MOF examines for consistency with the SEL or the FFTL.

THE NETHERLANDS

N/A

SPAIN

Yes. Closing prices of each contract are detailed in the General Terms of contracts that must be approved by the CNMV. There is not an opening price calculation procedure as it is the first price for futures and options but the contrary occurs for the closing price. As the closing price is the one used by the exchanges for the daily margin calculation and daily Profit and Loss settlements, CNMV requirements are designed pursuing to avoid any price manipulation imposing certain number of trades and volumes to calculate the closing price.

UNITED KINGDOM

To meet their orderly conduct of business obligations, exchanges are expected to have opening and closing price procedures that minimise the risk of price manipulation.

UNITED STATES – CFTC

See answer to item #17. CFTC reviews for consistency with CFTC Regulation 1.38 and IOSCO Principle 3.

UNITED STATES – SEC

Yes. Exchanges are expected to have rules regarding opening and closing price procedures. These rules are subject to review and approval by the Commission and must be designed, in general, to protect investors and promote the integrity of the market.

ARGENTINA

At the moment there are no laws, rules or regulations specifically addressing electronic screen-based trading systems.

Thus, this item is examined when futures markets submit their rules regarding the implementation of screen trading systems.

BRAZIL

Yes, but to date CVM hasn't established any specific requirement.

JAPAN –MITI/MAFF

Yes. The MAFF or MITI examines for consistency with the CEL.

MALAYSIA

KLOFFE does not examine the opening price. The daily closing price is examined by the Malaysian Derivatives Clearing House (MDCH). However, the final settlement value for month-end is calculated by

KLOFFE. This is done by averaging the last 30 values of the cash index after taking out the highest and lowest values.

SINGAPORE

SIMEX oversees initial and direct applications for such systems, and consults with the Authority on major supervision matters. SIMEX Rules, including those in relation to the determination of settlement prices and trading procedures, are reviewed by MAS. SIMEX also has pre-opening call procedures for both open outcry and electronic trading.

23. Do you examine the system's specific procedures, if any, for handling errors? If so, please describe and note any explicit requirements.

The majority of jurisdictions examine the system's procedures for handling trading errors but there are no specific requirements
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AUSTRALIA

ASIC reviews the error handling procedures of any new applications as part of the authorisation process, and reviews the procedures for existing exchanges on a for cause basis. If the procedures are part of the business rules of the exchange, ASIC will review any proposed business rule changes. ASIC considers equity, efficiency, timeliness, transparency, and robustness issues. There are no explicit regulatory requirements.

CANADA – ONTARIO

Currently, if the system is recognized as an exchange, the Commission is considering implementing an audit review program. In the proposed regulatory framework for ATs, this area will be reviewed.

CANADA-QUEBEC

Currently, if the system is recognized as an exchange, the CVMQ is considering implementing an audit review program.

In the proposed regulatory framework for ATs, this area will be reviewed.

FRANCE

Yes, but there are no explicit requirements.

GERMANY

No specific requirements. The system has to be designed to ensure orderly trading

HONG KONG

Yes. Error reporting is the main area checked for reporting of handling errors. See SEHK and HKFE Rules for details.

ITALY

Yes. Market rules must provide specific error handling procedures. In particular, such procedures must be designed to identify abusive erroneous transactions .

JAPAN – MOF

Yes. The MOF examines to ensure that exchange has safeguards against abusing erroneous trade procedures.

THE NETHERLANDS

N/A

SPAIN

There is a rule containing what cases and circumstances could be consider as handling errors. The Trading Supervisor or the Supervision Committee shall decide when an executed trade identified by a member as an error can be annulled

UNITED KINGDOM

All exchanges are expected to have rules and procedures for handling errors, whether caused by a member or the exchange itself. The FSA does not mandate any specific policy for error handling .

UNITED STATES – CFTC

No explicit requirements. CFTC will examine to ensure that exchange has safeguards against abusing erroneous trade procedures to escape disadvantageous or non-erroneous transactions.

UNITED STATES – SEC

Yes. See above.

ARGENTINA

No explicit requirements. CNV will examine to ensure that exchange has safeguards against abusing erroneous trade procedures to escape disadvantageous or non-erroneous transactions.

BRAZIL

No

JAPAN – MITI/MAFF

No explicit requirements. The MAFF or MITI examines to ensure that exchange has safeguards against abusing erroneous trade procedure.

MALAYSIA

N/A

SINGAPORE

SIMEX has laid down error trade policy and procedures, which have been reviewed by MAS.

24. Do you examine the system's procedures for handling trading halts, including the treatment of orders pending in trading systems at the time of the halt?

The majority of jurisdictions report that they examine the procedures for handling trading halts.

AUSTRALIA

ASIC reviews the trading halt procedures of any new applications as part of the authorisation process, and reviews the procedures for existing exchanges on a for cause basis.

ASIC requires that the procedures be part of the business rules of the exchange, therefore ASIC will review any proposed business rule changes. There are no explicit regulatory requirements.

CANADA – ONTARIO

The Commission reviews the procedures for handling trading halts on an exchange. In the future, the procedures for handling trading halts on an ATS will likely be reviewed.

CANADA-QUEBEC

The CVMQ reviews the procedures for handling trading halts on an exchange. In the future, the procedures for handling trading halts on an ATS will likely be reviewed.

FRANCE

Yes.

GERMANY

Yes. The requirements are laid down in the Exchange Rules which are approved by the State Exchange Supervisory Authority.

The decision to halt trading is made by the Board of Management of the exchange.

HONG KONG

Yes. If the trading halt is called upon by the exchanges for whatever reasons, prior consultation with the SFC is required. If the trading halt is due to system malfunction, the exchange procedures will be followed and the SFC should be notified immediately.

ITALY

Yes. Market rules must indicate which events may bring trading to a halt. These procedures must, also, guarantee that in these cases a prompt notice would be disclosed to the market. Pending orders must be handled till trading starts again.

JAPAN – MOF

Yes. The MOF examines trading halt procedures to ensure that there is sufficient notice to exchange members as to how their orders handled in the event of trading halt.

THE NETHERLANDS

N/A

SPAIN

MEFF RF is the only one that handles trading halts when price reaches daily fluctuation limits. Orders received before trading ceases are maintained in the exchanges central order book.

In the case of halts due to technical causes, members of MEFF RF are able to cancel pending orders from the order book prior to trading resume. Pending orders in MEFF RV are automatically cancelled by the Exchange, without members intervention

Messages are spread through the trading screens noticing the imminent halt an its subsequence resume.

CNMV examines trading halt procedures and any action taken by exchanges in the event of a trading halt.

UNITED KINGDOM

The FSA reviews exchanges' procedures governing trading halts, particularly the handling procedures for orders already in the system and the procedures for restarting trading. The FSA does not prescribe the use of trading halts on each exchange but would expect an exchange to take into account the protection of investors, the potential abuse of trading halts, the procedures being used on other exchanges trading the same contract or the underlying.

UNITED STATES – CFTC

CFTC examines trading halt procedures to ensure that there is sufficient notice to market users as to how their orders would be handled in the event of a trading halt. In addition, as relevant, the CFTC assures that such halts are coordinated with those provided for in related markets.

UNITED STATES –SEC

Yes. Exchanges are expected to adopt trading halt rules. These rules are subject to review and approval by the Commission and must be designed, in general, to protect investors and promote the integrity of the market. In addition, exchanges are required to comply with Commission rules regarding trading halts. See Exchange Act Sections 12(k)(1)(A) and (B) and Exchange Act Rule 11Ac1-1.

ARGENTINA

No.

BRAZIL

With respect to the exchanges, CVM reviews all the issues related to trading halts. For dealers systems, since market makers are required, there are no circuit breaker, established.

JAPAN – MITI/MAFF

Yes. The MAFF or MITI examines trading halt procedures to ensure that there is sufficient notice to exchange members as to how their orders handled in the event of trading halt.

MALAYSIA

Trading is halted each day for lunch break, and when the 'safety net prices' are reached. When the system resumes trading again, all pending orders except combination orders become working orders. Traders have to re-activate their own combination orders. The Exchange does not examine the orders.

SINGAPORE

SIMEX Rules, including those in relation to special exception handling routines such as trading halts, are reviewed by MAS.

Relevant Disclosures

25. Do you examine and/or review the rules providing for disclosure of relevant risks to system users and customers. If so, please describe any explicit requirements.

The majority of jurisdictions report that they examine the related risk disclosure documents.

In some jurisdictions, disclosure content is mandated by regulation [*see, e.g.,* Australia and Singapore].

AUSTRALIA

No, the content of a mandatory risk disclosure statements is prescribed in the Corporations Law

CANADA – ONTARIO

The Commission reviews all rules of the exchange.

CANADA – QUEBEC

The CVMQ reviews all rules of the exchange.

FRANCE

Yes. IOSCO Principle 9 applied under COB regulation, a derivative exchange (futures and option) must draw an information note describing how the exchange operates, the type of instrument traded, the transactions that may take place on such exchange, the liabilities imposed on market participants and the risks incurred. This information document has to be approved by the COB and must be handed to market participants by the investment service provider on the opening of an account or before the transmission of the first order on a derivative exchange.

GERMANY

Yes. Although there are no specific rules for the disclosure of relevant risks to the system users, the exchange explains risks to members.
IOSCO Principle No. 9 applies.

HONG KONG

Yes. The systems sponsor must provide a Risk Disclosure statement to systems' users and customers.

ITALY

Yes. IOSCO Principle 9 applied. Further more, intermediaries must give the clients a risk disclosure document, in which, among others, relevant risks arising from trading on electronic system are specified.

JAPAN – MOF

Yes. IOSCO Principle 9 applied. The MOF examines to ensure adequate disclosure of relevant risks.

THE NETHERLANDS

N/A

SPAIN

Markets do not set rules on that matter. The CNMV or the Bank of Spain as supervisors regulates this topic.

UNITED KINGDOM

The FSA would expect relevant risks to be disclosed by an exchange to its members, and for members to disclose relevant risks to their customers.

UNITED STATES – CFTC

Yes. IOSCO Principle 9 applied. Exchange rules reviewed to ensure adequate disclosure of risk particular to trading through the system. CFTC staff is exploring the development of a uniform electronic system disclosure document.

UNITED STATES – SEC

Yes. The Commission reviews exchange rules to ensure that they comply with the Exchange Act. See Exchange Act Section 19. Broker-dealers and other market participants also are subject to SRO rules and to the general anti-fraud provisions of the federal securities laws.

ARGENTINA

No.

BRAZIL

Yes. Since screen-based systems are so incipient in Brazil there is no specific rule on relevant disclosure. Requirements follow general rules applied to exchanges.

JAPAN –MITI/MAFF

Yes. Although there are no particular rules for the disclosure of relevant risks to the system users, the exchange explains risks caused by system failure to members when they install terminals.

MALAYSIA

N/A

SINGAPORE

Under section 39 FTA, a futures broker has to furnish the customer with a separate written risk disclosure document in the form prescribed by the MAS at the time the futures trading account is opened. Form 12 FTR requires, inter alia, an explanation of the effect of leverage and risk-reducing orders or strategies. Where electronic systems are concerned paragraph (g) of Form 12 warns the investor that such facilities and systems are vulnerable to temporary disruption or failure. In addition, paragraph (h) warns that an electronic system may differ not only from an open-outcry system, but also from other electronic systems. It further warns of risks associated with hardware and software failure, specifically the danger that an order may not be executed according to the customer's instructions or at all. Futures trading advisers must furnish to their clients a risk disclosure statement prescribed in Form 14 FTR.

26. Do you have any explicit requirements relating to limitation of liability for system malfunction?

The majority of jurisdictions do not impose any explicit requirements concerning limitation of liability.

Malaysia reports limitation of liability provision.

AUSTRALIA

No.

CANADA – ONTARIO

No.

CANADA – QUEBEC

No.

FRANCE

No explicit requirements.

GERMANY

No.

HONG KONG

Disclaimers are, however, made by exchanges regarding liability limitation for system malfunction.

ITALY

No.

JAPAN -MOF

No. There are no explicit requirements, however, all the exchanges explain on scope of liability for system malfunction to their members.

THE NETHERLANDS

N/A

SPAIN

There are no explicit requirements.

UNITED KINGDOM

The FSA would expect relevant risks to be disclosed by an exchange to its members, and for members to disclose relevant risks to their customers.

UNITED STATES – CFTC

No. There are no explicit requirements, though CFTC has consistently required that limitation of liability provisions may in no way limit the applicability of any provision of the Act or the CFTC's regulations.

UNITED STATES – SEC

No.

ARGENTINA

No.

BRAZIL

No.

JAPAN – MITI/MAFF

No. There are no explicit requirements. However, exchange rules specify the limitation of liability in case of a system malfunction as that the Exchange shall not be responsible, even if a member incurs damages by using the Exchange's facilities in his business activities, for such damages unless stated otherwise in Japanese laws and regulations.

MALAYSIA

KLOFFE shall not be liable for any losses incurred due to interruption of its operations as a consequence of force majeure, riots, acts of war or natural disasters, or other events for which the Exchange is not responsible or that may result from actions by governmental authorities locally or abroad. The same shall

apply with respect to damage suffered by a Member as a consequence of technical problems or of the full or partial unavailability of the Exchange automated trading system except if the damage was due to the Exchange's intentional conduct or gross negligence.

SINGAPORE

No. However, paragraph (g) of Form 12 FTR warns that the ability to recover certain losses may be subject to limits on liability imposed by the system provider, the market, the clearing house and/or member firms. The customer is further urged to ask his broker for details in this respect.

Records (audit trail)

27. Do you examine and/or approve rules or procedures that relate to the records that are generated by the screen-based system? Please describe any regulatory requirements, including access to records by the regulatory authority, and note any minimum levels of data required to be maintained. What data pertaining to trades is required to be entered into the system and when? For example:

- **information regarding trade data to be input before or after a trade (e.g., customer account information); and**
- **access to records by the regulatory authority.**

All respondents review and/or approve procedures for records generated by the system

All respondents require recordkeeping sufficient to audit the transaction.

AUSTRALIA

ASIC reviews the recording functions of any new applications as part of the authorisation process, and reviews the procedures for existing exchanges on a for cause basis. If the procedures are part of the business rules of the exchange, ASIC will review any proposed business rule changes, but ASIC does not require them to be part of the business rules. There are no explicit regulatory requirements.

ASIC requires the business rules of exchanges to mandate that members' electronic systems generate adequate records for a regulatory audit trail.

ASIC does not mandate any particular period which exchanges' rules require those records to be kept. ASX's current requirement is for members to retain records for seven (7) years. SFE has a similar requirement.

Please describe any regulatory requirements, including access to records by the regulatory authority, and note any minimum levels of data required to be maintained.

All authorised markets, and regulated entities, are required under the Corporations Law to provide ASIC with free access to all data and records generated as part of the records of their business.

What data pertaining to trades is required to be entered into the system and when? For example: information regarding trade data to be input before or after a trade (e.g., customer account information).

Under ASX's screen based derivatives trading system, only the data required to execute a trade is required to be entered at the time an order is placed into the central order book. The clearing member must provide the clearinghouse with the client's account details before opening of trading the next day, otherwise the default is that the trade is booked to the clearing member's principal.

Under ASX's Automated Client Order Processing Rules, each member which allows clients to access the system through its system must retain accurate records which will allow an audit of the time, place, terminal, log-on identity etc of any order placed into the system. The records must be kept for seven years.

CANADA – ONTARIO

Exchange- Part VII of the *Securities Act* requires a recognized stock exchange to keep a record of time at which each transaction on the exchange took place and shall supply to any client of a member of the exchange a written confirmation of the transaction with particulars of the time and place of the transaction and verification or otherwise of the matters set forth in the written confirmation. In addition, market participants (includes the exchange) must

- . keep books, records and other documents as are necessary for proper recording of its business transactions
- . deliver to the Commission at such time as the Commission may require such books and records and other documents or any filings, reports and other communication made to any regulatory agency whether within Ontario or not, except where prohibited by law.

Under the CFA, every commodity futures exchange shall keep such records as are necessary for the proper recording of each transaction on the exchange and shall supply to any customer particulars of the time at which the transaction took place and verification and deliver to the Commission reports as to transactions of such exchange at such times as the Commission may require (section 22).

ATSS *In the proposed regulatory framework for ATSS, we are proposing that ATSS make and keep the records necessary to create a meaningful audit trail. Specifically, ATSS are required to maintain daily summaries of trading and time-sequenced records of order information, including the date and time the order was received, the date, time and price at which the order was executed and the identity of the parties to the transaction. These recordkeeping requirements also require the ATSS to keep records of all notices provided to subscribers, including notices addressing hours of operation, system malfunctions, changes to system procedures, and instructions pertaining to access to the ATSS. In addition, ATSS are required to keep documents made (if any) in the course of complying with the systems capacity, integrity and security standards. These documents include all reports to an ATSS's senior management and records concerning current and future capacity estimates and the results of any stress tests conducted. The Commission may request any of these records.*

CANADA-QUEBEC

Exchange Before recognizing an exchange as a self-regulatory organization, the CVMQ must consider if the organization has financial resources and administrative structure adequate to its object.

Every recognized organization must maintain and keep such books and records and other documents as the CVMQ may determine.

The CVMQ has the power to make an inspection of a self-regulatory organization. The self-regulatory organization must give to the inspector access to all books and registers or other documents relating to the carrying on of its activities.

The recognized SRO must maintain books and records and other documents as the CVMQ may determine.

ATs – In the proposed regulatory framework for ATs, we are proposing that ATs make and keep the records necessary to create a meaningful audit trail. Specifically, ATs are required to maintain daily summaries of trading and time-sequenced records of order information, including the date and time the order was received, the date, time and price at which the order was executed and the identity of the parties to the transaction. These recordkeeping requirements also require the AT to keep records of all notices provided to subscribers, including notices addressing hours of operation, system malfunctions, changes to system procedures, and instructions pertaining to access to the AT. In addition, ATs are required to keep documents made (if any) in the course of complying with the systems capacity, integrity and security standards. These documents include all reports to an AT's senior management and records concerning current and future capacity estimates and the results of any stress tests conducted. The Commission may request any of these records.

FRANCE

Under article 4-1-30 of the General Regulation of the CMF, an exchange must keep the information related to the transactions made on a regulated market for a period of at least ten years (including time, price size, sequence of transactions, intermediaries involved).

The CMF has access to such information to monitor that the transactions made on a regulated market comply with the rules of the market and with the General Regulation of the CMF.

The COB also has access to such information to fulfill its mission, including its enforcement role, as set out in the ordinance of 1967.

GERMANY

The German Exchange Act requires that an exchange maintains and utilises a systems to monitor trading, clearing and settlement, and detect violations of the exchange's rules. The system must include audit trail and recordkeeping systems able to capture data on terms, participants, and precise time and sequence of transactions systematically and completely. Account numbers are required to be entered at the time of the order.

HONG KONG

Yes. The SFC must approve all new rules/procedures and amendments pertaining to trading on HK exchanges .

There are regulatory requirements, including those for surveillance, inspection and investigatory purposes. The SFC must have access to records for surveillance purposes.

Minimum data maintenance: There are numerous disclosure requirements regarding record-keeping by licensed persons and there are also auditing and accounting requirements in FRR.

ITALY

Yes. Consob requires the exchange to register all the transaction concluded in the market and to keep them for 8 years. In particular, for each transaction these information must include:

- a) identification of the intermediaries;
- b) information about orders, including cancelled or modified orders;
- c) sell or buy;
- d) instrument exchanged;
- e) quantity;
- f) price;
- g) time and date of the transaction .

This information may be accessed only by the exchange and Consob.

JAPAN – MOF

Yes. The SEL, the FFTL and the rules of exchanges stipulate that the order and trade data of the members shall be recorded with the books for a specified period, and shall be provided for inquiry, etc. by the relevant authority as needed. Also, the members shall show whether they input an order as a proprietary order or a customer's order.

THE NETHERLANDS

N/A

SPAIN

Information about customer's orders must be kept for 6 years for regulatory review. Order information includes price, quantity, volume, type of order, sign (sell or buy).

Tape records containing customers –brokers conversations about orders must be kept for 3 months by market members and can be request by the regulator.

UNITED KINGDOM

An exchange is required under the FS Act to have satisfactory arrangements for recording transactions effected on the exchange. In practice, we require an exchange to be able to recreate a trade, including the identity of the client (at least to the first level beyond the member) in sufficient detail to monitor compliance with its rules, to resolve any disputes, to facilitate risk management and to assist in combating market abuse.

UNITED STATES – CFTC

Section 5a(b)(1) of the CEA and CFTC rule 1.35 require that a contract market maintain and utilize a system to monitor trading and detect violations of the contract market's trading rules. The system must include audit trail and recordkeeping systems able to capture data on the terms, participants, and precise time and sequence of transactions. Account numbers generally are required to be entered at the time of the order.

UNITED STATES – SEC

Yes. Exchanges are required under SRO rules to maintain an adequate audit trail of trading activity. See Exchange Release Section IV.B. These records are subject to routine or special examinations by the SEC.

ARGENTINA

As a general rule, CNV requires markets to maintain and utilize a system to monitor trading and detect violations of the contracts' trading rules. Thus, the system must include audit trail and recordkeeping systems able to capture data on the terms and participants.

BRAZIL

Regulation requires full assessment by regulatory agency. CVM access real-time trading data, customers information, clearing positions, collateral deposits, etc... SRO and brokers are also required to keep five years records on all the data.

JAPAN – MITI/MAFF

Yes. It is required to retain records generated by screen-based trading including both order and trade data for a certain time period specified by relevant rules and regulations. These records shall be provided for inquiry by the relevant authority as needed.

MALAYSIA

Upon receiving clients' orders, the following are keyed into the system:-

- client name and account number

- contract details
- whether it is an opening or closing transaction
- whether it is buy or sell
- contract series
- types of order
- number of lots
- price
- put or call (for options)
- exercise price (for options)

In addition to the above, the Members have to fill up order tickets with the same information as listed above plus the date and time of receipt, transmission and execution of those instructions.

The Exchange has on-line access to the orders keyed into the system as well as matched trades information.

SINGAPORE

Amongst the factors considered by the MAS in approving a body corporate as a Futures Exchange under the FTA are whether the business rules of the body corporate make adequate provision to record and publish details of trading. SIMEX's automated trading system provides a trade limit monitoring system to monitor all customer and trader account limits; and complete and reliable records of all orders, modifications and cancellations. In addition, under section 43 FTA, MAS may order an exchange, clearing house, futures broker or adviser to produce any books, accounts or records kept in connection with or for the purposes of his business. MAS may take copies or extracts of these documents.

28. Do you have any regulatory requirements regarding how long such system records be retained and by whom?

The majority of reporting jurisdictions mandate minimum retention periods. Although Australia does not have a *statutory* requirement, the regulator and exchange agreed on such requirements during the exchange rule approval process.

AUSTRALIA

See answers above. The requirements are not statutory, but the business rule requirements were agreed between the exchange and ASIC when the revised rules for screen based trading, and then Automated Client Order Processing, were introduced and reviewed by ASIC.

CANADA – ONTARIO

In the proposed regulatory framework for ATSS, we are proposing that ATSS preserve the records for a period of not less than 7 years from the creation of the document (the first two years in a readily accessible location).

CANADA-QUEBEC

In the proposed regulatory framework for ATSS, we are proposing that ATSS preserve the records for a period of not less than 7 years from the creation of the document (the first two years in a readily accessible location).

FRANCE

In addition to record-keeping by the exchange (see above), investment service providers have to keep a record of the data related to all the orders executed for own account or for a customer account (price, quantity, time, sequence, name of the customer) for at least five years.

GERMANY

Yes. The Market Supervision Board of the exchange retains the audit trails for at least 10 years. All audit trails generated since the establishment of Eurex's predecessor DTB in 1990 are still available. The data comprises not only orders and matched trades but all ticks.

The Market Supervision Board of the exchange as well as the State Exchange Supervisory Authority have access to all order routing and trading data.

HONG KONG

Maintenance of trading records requirements are part of the surveillance requirements imposed upon HK Exchanges.

ITALY

Yes. See answer no. 27.

JAPAN – MOF

Yes. Exchanges are required to keep all books and records be accessible by the relevant authority for a period of at least 10 years by the rules of themselves.

THE NETHERLANDS

N/A

SPAIN

See 27.

UNITED KINGDOM

No

UNITED STATES – CFTC

Yes. Rule 1.31 requires all books and records to be kept for a period of 5 years and to be readily accessible during the first 2 years of the 5 year period. The CFTC will be issuing final rules shortly enhancing its regulatory standards which permit the storage of such data in electronic media.

UNITED STATES – SEC

Section 17 of the Exchange Act and the rules thereunder require every national securities exchange to maintain system records. Additionally, Section 6 of the Exchange Act and the rules thereunder require exchanges to periodically provide the Commission with reports regarding the operation of the system.

ARGENTINA

No.

BRAZIL

Five years according to CVM Rule N° 220.

JAPAN – MITI/MAFF

See answer to 27 for the required time period. The exchange is required to keep all records and books.

MALAYSIA

It is a requirement set out in the Business Rules that Members have to keep their internal records for a period of not less than seven (7) years.

As for electronic or magnetic audio records such as voice logging machine are required to be maintained for a period of not less than two (2) years from the date that such records are made.

SINGAPORE

As a company, an exchange is required to keep such accounting and other records as will sufficiently explain the transactions and financial position of the company for a period of 7 years after the completion of the transactions or operations to which they relate: see section 199 of the Companies Act. Futures brokers are also expected to maintain similar records for a period of not less than 6 years: see section 25 FTA.

Products

29. Do you have any requirements on the suitability of products specifically for screen-based trading? If so, please describe.

There do not appear to be any such specific “suitability of product” requirements for screen-based trading.

AUSTRALIA

No.

CANADA – ONTARIO

As with other exchange traded securities, there are reporting issuer requirements applicable (including, for example, continuous disclosure requirements).

CANADA-QUEBEC

As with other exchange traded securities, there are reporting issuer requirements applicable (including, for example, continuous disclosure requirements).

FRANCE

No.

GERMANY

No.

HONG KONG

No, although new products put forward by the exchanges must be reviewed and approved by the SFC before launching.

ITALY

No.

JAPAN – MOF

No.

THE NETHERLANDS

N/A

SPAIN

No since all products are screen based traded.

UNITED KINGDOM

No. Whatever the method of trading, an exchange is required to limit trading to investments in which there is a proper market.

UNITED STATES – CFTC

No.

UNITED STATES – SEC

SROs may list and trade new derivative securities products subject to the conditions set forth in recently adopted amendments to Rule 19b-4 of the Exchange Act without being required to comply with the usual provisions associated with making a proposed rule change under Exchange Act Section 19. See Securities Exchange Act Release No. 40761 (December 8, 1998), 63 FR 709 (December 22, 1998) (“New Products Release”).

ARGENTINA

No.

BRAZIL

Derivatives products are subjected to CVM prior approval.

JAPAN – MITI/MAFF

No.

MALAYSIA

N/A

SINGAPORE

No.

30. Do you impose any restrictions on the type of products that may be traded on electronic systems or on who can trade particular products on the system (e.g., product restrictions applicable only to domestic users)?

The majority of jurisdictions report no such requirements unique to screen-trading systems (i.e., other than general product restrictions or requirements for registration .

Canada’s proposed framework specifically would define the type of products that could be traded on an ATS (See Ontario and Quebec).

AUSTRALIA

No.

CANADA – ONTARIO

In the proposed regulatory framework for ATSS, we are proposing that an ATS trade only an ATS Security which is defined as: (1) a security issued by a reporting issuer in any Canadian jurisdiction or a derivative of such security; (2) a debt security of or guaranteed by the government of Canada or a Canadian jurisdiction, or (3) a security listed or quoted on a market to be determined.

CANADA – QUEBEC

In the proposed regulatory framework for ATSS, we are proposing that an ATS trade only an ATS Security which is defined as: (1) a security issued by a reporting issuer in any Canadian jurisdiction or a derivative of such security; (2) a debt security of or guaranteed by the government of Canada or a Canadian jurisdiction, or (3) a security listed or quoted on a market to be determined.

FRANCE

No restrictions specific to screen trading.

GERMANY

No.

HONG KONG

No.

ITALY

No restrictions specific to screen-trading are imposed.

JAPAN – MOF

No restrictions specific to screen-trading. However, general product restrictions apply.

THE NETHERLANDS

N/A

SPAIN

Again, no restrictions specific to screen trading.

UNITED KINGDOM

No. See previous answer.

UNITED STATES – CFTC

No restrictions specific to screen-trading. However, general product restrictions apply (i.e., no futures contract on individual securities; if foreign contract, foreign stock index futures must be subject of CFTC no-action letter and no futures on a foreign government debt unless the debt itself constitutes an “exempted security” under SEC rules).

UNITED STATES – SEC

Yes. Securities that are traded on a national securities exchange must be registered with the Commission. See Section 12 of the Exchange Act. As noted above, only registered broker-dealers may be members of a national securities exchange.

ARGENTINA

No.

BRAZIL

CVM only regulates those derivatives which the underlying asset is a security issued by a public company. All derivatives contracts on government bonds, commodities and foreign exchange instruments are regulated by the Central Bank. There is no formal restriction on product type. These restrictions may apply during the process prior to the approval of the contract design.

JAPAN –MITI/MAFF

No restrictions specific to screen-based trading. However, general product restrictions apply.

MALAYSIA

N/A

SINGAPORE

No.

Clearing

31. Do you examine the clearing process? If so, please describe and note any explicit requirements.

All jurisdictions report that they review the clearing process but there are no specific requirements related to screen-based systems.
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AUSTRALIA

Securities and futures clearinghouses are required to be separately authorised by the Minister under the Corporations Law.

ASIC reviews the clearing functions of any new clearing house applications and makes its recommendation as part of the authorisation process. ASIC reviews the procedures for existing clearing houses on a for cause basis. Most of the clearing procedures are required to be set out in the clearing house's business rules. ASIC will review any proposed business rule changes.

There are some general regulatory requirements for clearing houses, for example s1131 of the Corporations Law. There are no specific requirements for clearing screen based trading systems.

CANADA – ONTARIO

Yes but there are no standards specifically dealing with electronic systems. Clearing corporations must be recognized under the *Securities Act* and CFA and must file all by-laws, rules, procedures and policies with the Commission for review and approval.

The Commission has general oversight of the clearinghouse (Canadian Depository for Securities).

In the proposed regulatory framework for ATSS, we are proposing that an ATS register as a dealer and be a member of an SRO which has requirements governing clearing and settlement. We are also proposing that an ATS report its procedures governing execution, reporting, clearance and settlement of transactions effected through the ATS. The Commission may review this information.

CANADA-QUEBEC

Yes but there are no standards specifically dealing with electronic systems. Clearing corporations must be recognized under the *Securities Act* and CFA and must file all by-laws, rules, procedures and policies with the CVMQ for review and approval.

The CVMQ has general oversight of the clearinghouse (Canadian Depository for Securities).

In the proposed regulatory framework for ATSS, we are proposing that an ATS register as a dealer and be a member of an SRO which has requirements governing clearing and settlement. We are also proposing that an ATS report its procedures governing execution, reporting, clearance and settlement of transactions effected through the ATS. The CVMQ may review this information.

FRANCE

The CMF examines the clearing process but there are not any standards especially applicable to electronic systems.

GERMANY

Yes. Examinations are required by the Exchange Act.

The Market Supervision Board of the exchange monitors the whole order routing, trading, and clearing and settlement. It reports to the State Exchange Supervisory Authority which is responsible for the administration of the provisions of the Exchange Act.

HONG KONG

- a) Yes. All three clearing houses, that are currently providing clearing and settlement services for commodity contracts or securities traded on the exchanges, were declared by the SFC as a recognized clearing house. All their rules require SFC approval before they become effective.
- b) The SFC approves settlement process, collateral requirements, margining methodology etc.

ITALY

Yes. As far as electronic systems are concerned, trading systems must provide on a real-time basis trading data to the clearing system, in order to monitor market and systemic risk on a real time basis.

JAPAN –MOF

Yes, but there are not any standards specifically applicable to electronic systems. The rules of clearing are examined by the MOF in light of the stipulations of the SEL or the FFTL mentioned above in the answer to 8(a).

THE NETHERLANDS

Yes, but there are no standards specially applicable to electronic systems.

SPAIN

Yes. In the Spanish derivatives exchanges, the Clearing House is fully integrated real time information about clearing is available for members including simulations about margins and Profit and Loss settlements. Each clearing figure (officially calculated once the market is closed or simulated during trading session) can be obtained aggregated for all the customer or proprietary accounts of a member in gross basis.

UNITED KINGDOM

Yes. There are no requirements specifically for the clearing of screen-based trades. An exchange is required to have arrangements for ensuring the performance of transactions effected on the exchange – or

to have arrangements with a Recognised Clearing House for this purpose. There is no requirement for trades to be cleared, only performed.

UNITED STATES – CFTC

Yes but there are not any standards specially applicable to electronic systems. Reviewed primarily against general obligation under the CEA and CFTC rules to maintain financial integrity and customer and market protection objectives. The review encompasses the activities of the exchange, its clearing house, intermediaries, members and customers.

UNITED STATES – SEC

Clearance and settlement services are provided by registered clearing agencies which are self-regulatory organizations and subject to examination by the Commission. Generally, the Commission conducts examinations to ensure that the clearing agency's rules and procedures provide for adequate access by qualified participants, fair representation of shareholders and participants, equitable pricing, prohibitions on fixing prices charged to its participants, and whether the rules impose an undue burden on competition.

ARGENTINA

Yes but there are no standards specially applicable to electronic systems. Reviewed primarily focus on rules to maintain financial integrity and customer and market protection. The review encompasses the activities of the market, its clearing house (independent entity or an in-house division), intermediaries, members and customers.

BRAZIL

Yes, but there is no explicit requirement established.

JAPAN – MITI/MAFF

Yes, but there are not any standards specifically applicable to electronic systems. MAFF or MITI supervises exchange clearing in general.

MALAYSIA

Such examinations have been conducted by auditors appointed by the Clearing House, in accordance with parameters set by the Securities Commission (SC), and the reports submitted to the SC for review. The areas of concern include interfaces between the clearing system and other systems, recovery from disruption or disaster, physical and logical security, manual and system controls, audit trails, change management, risk management, and desktop banking.

SINGAPORE

There are no explicit requirements for electronic systems. Under section 9 FTA, however, a clearing house must satisfy the MAS that its business rules make satisfactory provision relating to the registration of, and guaranteeing to its members of the performance of futures contract, and that the grant of approval furthers the interests of the public.

32. Do you require screen-based systems to feed executed trade details directly to the settlement organization?

The majority do not report such a requirement.

Italy and Spain reported such a requirement.

AUSTRALIA

There is no specific requirement for screen-based systems to feed executed trade details directly to the settlement organisation. However, as the exchanges in Australia operate their own clearinghouses, this is the case in Australia.

CANADA – ONTARIO

Currently, this is not a requirement. This will be considered in connection with the proposed regulatory framework for ATs.

CANADA-QUEBEC

Currently, this is not a requirement. This will be considered in connection with the proposed regulatory framework for ATs.

FRANCE

There are no specific requirements in this area but this is actually the case for all transactions executed on an electronic exchange.

GERMANY

No requirements. However, all trades effected via electronic systems are fed directly into the clearing and settlement process.

HONG KONG

No requirement. However, currently, all trades effected through the exchanges' electronic systems are fed directly into the respective clearing system.

ITALY

Yes. See answer no. 31

JAPAN – MOF

Such problem does not exist, for both execution system and clearing and settlement system are operated within the exchange itself.

THE NETHERLANDS

No, however the screen based system for stocks feeds executed trades directly to the settlement organization.

SPAIN

Yes but as explained above the trading screens also contain clearing information provided by the exchanges on line.

UNITED KINGDOM

No, the FSA does not require this. It leaves the exchange to establish whatever arrangements it considers necessary to enable it to meet the recognition requirements referred to in answer 31.

UNITED STATES – CFTC

No CFTC requirement, however, the CFTC has publicly strongly encouraged reduction in time between trade execution and trade clearing and settlement.

UNITED STATES – SEC

No. The Commission allows exchanges to establish their settlement procedures. However, typically exchanges submit trade data directly to a clearing agency.

ARGENTINA

No.

BRAZIL

No.

JAPAN – MITI/MAFF

No, however, currently the trading system directly connects with clearing system.

MALAYSIA

No, but the systems are being improved to achieve this.

SINGAPORE

This is not mandated. However, when approving an electronic trading system, MAS would ensure that there are satisfactory clearing and settlement arrangements for contracts traded on the system.

33. Access to clearing system:

- d) **Must clearing take place through an intermediary?**
- e) **Can a domestic customer have direct access to clearing?**
- f) **Do you (or any other authority in your jurisdiction) place any restriction on a foreign member of a domestic market having direct access to the clearing system (*i.e.*, by requiring them to make use of a domestic clearing member?)**
If so, please explain the rationale.

- (a) All reported “yes.”
- (b) The majority reported “no.” Canada reported that a domestic customer may have direct access to clearing in limited circumstances (*e.g.*, banks); the US SEC noted that banks and insurance companies are types of entities that must be admitted as clearing members.
- (c) The majority of jurisdictions report no restrictions. Japan and Brazil require local branches. Singapore appears to require that the foreign firm be a corporation.

AUSTRALIA

- a) Yes.
- b) No.
- c) No.

CANADA – ONTARIO

- (a) In general, clearing must take place through an intermediary (banks may clear directly with the clearing system)
- (b) A domestic customer may have direct access to clearing in some limited circumstances (*e.g.*, banks).

(c) We do not place any restriction on a foreign member of a domestic market having direct access to the clearing systems.

CANADA-QUEBEC

(a) In general, clearing must take place through an intermediary (banks may clear directly with the clearing system)

(b) A domestic customer may have direct access to clearing in some limited circumstances (e.g., banks).

(c) We do not place any restriction on a foreign member of a domestic market having direct access to the clearing systems.

FRANCE

a) Yes. Clearing must take place through an investment service provider or a bank.

b) No. Currently, no customer may have unintermediated access to the clearing system.

Currently, there are no foreign firms as clearing members but the first foreign (Italian) clearing member is expected to be authorized in a couple of months.

GERMANY

see Part Ii for details.

a) Yes.

b) Only via a Direct Clearing Member or a General Clearing Member.

c) No.

HONG KONG

a) Yes

b) HKCC has an investor participation function whereby investors may hold accounts at the Clearing House but settlement must still be effected through brokers.

c) No.

ITALY

(a) Yes. Only authorized intermediaries may become clearing members.

(b) No.

(c) No.

JAPAN – MOF

a) Yes. Clearing takes place through the system operated by the exchange itself.

b) No. No customer may have unintermediated access to the clearing system.

c) No. However, exchange members are required to have a branch in Japan by the rules of exchanges approved by the MOF and the FSA.

THE NETHERLANDS

(a) Yes.

(b) No, trading and clearing takes place through an intermediary.

(c) No.

SPAIN

a) Yes. Clearing must take place through Clearing Members. So Non-Clearing members must subscribe a clearing contract with Clearing members as a prerequisite to be accepted as members by the exchanges.

b) No. Trading and clearing must take place through exchange members.

Branch Offices of foreign firms, registered at the Bank of Spain or the CNMV, are currently Clearing Members of Spanish derivatives markets.

UNITED KINGDOM

- a) Yes
- b) No
- c) No (subject to the foreign member being able to meet similar criteria to those for domestic members).

UNITED STATES – CFTC

- (a) Yes. Currently that is the case, although the CFTC is considering a proposal, FutureCom, that would not involve intermediaries.
- (b) No. Currently, no customer may have unintermediated access to the clearing system. However, as indicated above, it is possible that there can be a market structure where a customer could become a member and not trade or clear through an intermediary.
- (c) No. U.S. futures exchanges accept foreign firms as clearing members.

UNITED STATES – SEC

- a) Unless an entity is registered or has been exempted from registration as a clearing agency, it must submit its trades to a registered clearing agency for clearance and settlement.
- b) Generally no. Section 17A of the Exchange Act sets forth the types of entities that clearing agencies must admit as members. These entities include any registered broker or dealer, registered clearing agency, registered investment company, bank, or insurance company.
- c) The Commission does not place any restrictions on foreign participation in the U.S. clearance and settlement system. However, clearing agencies which do provide for foreign participation generally have specific admission standards for foreign participants.

ARGENTINA

At the moment, there are two futures markets in Argentina, and neither has an independent clearing house.

- (a) Yes. At the moment all futures markets intermediaries are also clearing intermediaries.
- (b) No. Currently, no customer may have unintermediated access to the clearing system.
- (c) No. Argentine futures markets accept Foreign Firms as intermediaries and therefore as clearing members.

BRAZIL

Yes, clearing must take place through an intermediary and the customer does not have direct access to clearing. Intermediaries cannot be foreign firms, unless it has an established branch in Brazil.

JAPAN – MITI/MAFF

- a) Yes. Clearing must take place through a member.
- b) No. A domestic customer cannot have direct access to the clearing system.
- c) No. However there has been no access from foreign member.

MALAYSIA

- a) Yes
 - b) No
- N/A

SINGAPORE

- (a) Yes. Under SIMEX Rules, this has to go through corporate clearing members.
- (b) No.
- (c) No, so long as the foreign firm is a corporate clearing member. Many of SIMEX's corporate clearing members are well-reputed international companies with a global network.

Orderly markets

34. Do you have special regulations/ guidance in respect of screen-based trading designed to maintain orderly markets (e.g., circuit breakers, trading suspensions, imposition of trading limits) ? If so, please describe.

The majority of jurisdictions do not have any such requirements that are unique to electronic systems. But see Malaysia.

AUSTRALIA

As part of authorisation, the exchanges must have specific business rules ensuring orderly trading for any markets they operate. There are no specific legislative provisions for screen based markets. Because all screen based markets have been relatively recent introductions, ASIC reviews the suitability of proposed orderly market rules for all screen based trading systems.

CANADA – ONTARIO

In our proposed regulatory framework for ATSS, we may require an ATS to halt trading when securities are halted on the market where they are listed.

CANADA-QUEBEC

In our proposed regulatory framework for ATSS, we may require an ATS to halt trading when securities are halted on the market where they are listed.

FRANCE

There are no requirements unique to screen trading systems.

GERMANY

There are no specific provisions with regard to screen-based trading systems. Of course, the German Exchange Act as well as the Exchange Regulations provide rules in order to maintain orderly markets.

HONG KONG

The HK market does not use “circuit breaker” procedures to maintain an orderly market although trading suspensions may be implemented and trading/position limits are imposed upon dealers and products.

ITALY

There are no specific requirements for screen-trading systems.

JAPAN – MOF

No. There are no requirements unique to screen-trading systems.

THE NETHERLANDS

There are no requirements unique to screen-trading derivatives systems. However AEX has special regulations for the screen based stock system (TSA).

SPAIN

There are not specific requirements as screen-trading systems are the only way to trade in the Spanish derivatives markets. As explained earlier there are limits applicable to members as they exceed certain risk limits beyond then it is not possible to open new positions unless new margins were posted. Both the

exchanges and the CNMV can suspend trading when occurs circumstances that could distort price discovery, harm investors or the own market.

UNITED KINGDOM

All exchanges are under a general obligation to ensure the orderly conduct of business, but there is no legislative requirement specific to screen-based trading. The FSA would expect exchanges providing electronic trading to have procedures in place to deal with order overload (e.g., as a result of members using computer generated order input systems).

UNITED STATES – CFTC

There are no requirements unique to screen-trading systems.

UNITED STATES – SEC

There are no such requirements unique to screen-based trading. National securities exchanges must comply with any Commission-instituted trading halt relating to securities traded on or through its facilities. See Section 12(k)(1)(A) and (B) of the Exchange Act. In addition, to promote the orderly operation of the securities markets in accordance with Section 6 of the Exchange Act, the Commission expects exchanges to implement circuit breaker rules to temporarily halt trading during periods of extraordinary market volatility or unusual market declines. Further, exchanges are expected to impose trading halts for individual securities, for classes of securities, and for its system as a whole under appropriate circumstances.

ARGENTINA

No.

BRAZIL

There are no specific requirements to screen-based trading.

JAPAN – MITI/MAFF

There are no requirements unique to screen-based trading systems.

MALAYSIA

Daily price limits

- A price limit of 20% in either direction for each trading session is imposed for the respective contract months, with the exception of the spot month contract.
 - There are no price limits for the second month contract for the final 5 business days.
- Safety-net price
- A limit of 25% is applied to the spot month contract and the second month contract for the final 5 business days.
 - In the event that a safety-net price is reached for the spot month or the second month contract, the Exchange will halt the market immediately and reset the safety-net prices for both the spot and second month contracts simultaneously based on their respective last done prices.

SINGAPORE

No. However, SIMEX Rules contain certain circuit breakers and trading limits. For example, the MSCI Singapore stock index future has a cooling off period when prices reach daily price limits.

Compliance

35. Do you conduct direct oversight of trading?

Eleven jurisdictions report that the regulator has a market oversight function independent of the exchanges.

AUSTRALIA

No. The exchanges conduct the direct oversight.

CANADA – ONTARIO

Generally, the exchange conducts direct oversight of trading (with appropriate oversight by the Commission). *In the proposed regulatory oversight for ATSS, we are proposing that monitoring and enforcement functions may be carried out directly by an ATS if it has been approved to do so (by the Commission) or through an agent if the agent has been approved to do so by the Commission. The agent must also enter into an agreement to coordinate the monitoring and enforcement functions.*

CANADA-QUEBEC

Generally, the exchange conducts direct surveillance of trading (with appropriate oversight by the CVMQ). *In the proposed regulatory oversight for ATSS, we are proposing that monitoring and enforcement functions may be carried out directly by an ATS if it has been approved to do so (by the CVMQ) or through an agent if the agent has been approved to do so by the CVMQ. The agent must also enter into an agreement to co-ordinate the monitoring and enforcement functions.*

FRANCE

Yes.

Regulated market operate their own market surveillance to ensure that market members comply with the exchange rules when trading on the market.

Oversight of trading by the CMF has a different scope since it aims at ensuring that rules of conduct governing investment firms, exchanges (market undertakings) and clearing houses are fully abide by and at monitoring the conformity of transactions carried out on a regulated market with exchange rules and CMF General Regulation. The CMF may delegate the monitoring of on exchange transactions to the exchange on which the transactions are carried out.

The COB conducts its own independent oversight of trading. Market surveillance carried out by the COB aims at detecting all practices and conducts that maybe a violation of securities laws and regulation and may affect investors protection and the proper functioning of the markets.

GERMANY

Direct oversight of trading is done by the Market Supervision Board of the exchange which reports to the State Exchange Supervisory Authority. That Authority is responsible for the oversight of the exchange.

HONG KONG

Yes. This is fulfilled by the surveillance requirement.

ITALY

Yes. Even if the exchange is responsible for trade and market surveillance, CONSOB conducts both real-time and ex-post market surveillance. In fact Consob must ensure that the exchange is fulfilling its continuing responsibilities and must take the place of the exchange in case of negligence.

JAPAN – MOF

Yes. Exchanges are primarily responsible for trade and market surveillance, although the Securities and Exchange Surveillance Commission independently conducts market surveillance and trade surveillance. The MOF and the FSA performs oversight audits to ensure that the exchanges are fulfilling their continuing responsibilities under the SEL or the FFTL.

THE NETHERLANDS

Yes. The exchange is primarily responsible for trade and market surveillance. The STE performs oversight audits to ensure that the exchange is fulfilling its continuing responsibilities under the Act on the Supervision of Securities Trade 1995 (Wte 1995), (includes Insider trading of which AEX reports indications to the STE).

SPAIN

Yes. There is a supervision department in the exchanges who are primarily responsible for trade and market surveillance. The CNMV Supervision Department conducts the trade, clearing and risk supervision on real time. Several computers review trades, clearing and member risk and there are an alarm system to detect prices and trades disturbances. At the market close a report is made and analyzed by CNMV Supervision staff.

UNITED KINGDOM

No. Exchanges have the front-line responsibility for overseeing trading.

UNITED STATES – CFTC

Yes. The exchange is primarily responsible for trade and market surveillance, although the CFTC independently conducts market surveillance (primarily through monitoring of large trader reports and electronic reports of trading activity via third-party vendors) and trade surveillance. The CFTC performs oversight audits to ensure that the exchange is fulfilling its continuing responsibilities under the CEA.

UNITED STATES – SEC

Exchanges are required to have surveillance rules and procedures designed to monitor trading for violations of the federal securities laws and exchange rules. In addition, Commission staff conducts periodic inspections and examinations of all SROs.

ARGENTINA

No.

The futures markets are primarily responsible for trade and market surveillance as self regulatory organizations.

CNV independently conducts market surveillance and trade surveillance. The CNV performs oversight audits to ensure that the market is fulfilling its continuing responsibilities under the regulations in place.

BRAZIL

Yes, CVM conducts market surveillance through real-time monitoring. CVM also developed filter systems and large trader reports to monitor special situations.

JAPAN - MITI/MAFF

Yes. Exchanges are primarily responsible for market surveillance, although MAFF or MITI conducts market surveillance and trade surveillance though the monitoring of large trader reports submitted by exchange.

MALAYSIA

Yes.

SINGAPORE

Yes. While the exchange is responsible for operational surveillance, MAS independently oversees trading activity. For example, regulation 28 FTR requires the exchange to submit to the MAS on a weekly basis, or at its request, a report showing for each type of futures contract the aggregate position carried in any futures trading account beneficially held by the same person that exceeds a prescribed quantity of futures contracts (i.e. large trader reporting).

- 36. Do you examine arrangements for monitoring trading and ensuring compliance with relevant requirements? If so, please describe and note any explicit requirements (e.g., authorization, trade and market surveillance, audit trail, etc.) relating to on-going surveillance of screen trading.**

All jurisdictions report auditing for compliance with relevant requirements. But see Malaysia.

AUSTRALIA

On the same basis

CANADA – ONTARIO

Exchange Surveillance activity is conducted by the exchange (with appropriate oversight by the Commission).

ATs – In the proposed regulatory framework for ATs, we are proposing that ATs make and keep the records necessary to create a meaningful audit trail. This includes daily summaries of trading and time-sequenced records of order information, including the date and time the order was received, the date, time and price at which the order was executed and the identity of the parties to the transaction. The Commission may review these records. We are also proposing framework rules which will be applicable to exchanges and ATs in order to ensure fair and orderly markets. The framework rules prescribe various trading rules and provide a mechanism for monitoring and enforcement. The monitoring and enforcement functions may be carried out directly by an AT if it has been approved to do so (by the Commission) or through an agent if the agent has been approved to do so by the Commission. The agent must also enter into an agreement to coordinate the monitoring and enforcement functions.

CANADA-QUEBEC

Exchange – Surveillance activity is conducted by the exchange (with appropriate oversight by the CVMQ).

ATs – In the proposed regulatory framework for ATs, we are proposing that ATs make and keep the records necessary to create a meaningful audit trail. This includes daily summaries of trading and time-sequenced records of order information, including the date and time the order was received, the date, time and price at which the order was executed and the identity of the parties to the transaction. The

CVMQ may review these records. We are also proposing framework rules which will be applicable to exchanges and ATs in order to ensure fair and orderly markets. The framework rules prescribe various trading rules and provide a mechanism for monitoring and enforcement. The monitoring and enforcement functions may be carried out directly by an ATs if it has been approved to do so (by the CVMQ) or through an agent if the agent has been approved to do so by the CVMQ. The agent must also enter into an agreement to co-ordinate the monitoring and enforcement functions.

FRANCE

Arrangement for monitoring compliance with its market rules by the exchange are examined in the review of the exchange rules.

GERMANY

Yes. As a condition of authorisation, an exchange must, inter alia: enforce all of its rules which have been reviewed and approved by the State Exchange Supervisory Authority and maintain and utilise a system to monitor trading to detect and to deter violations of market rules.

HONG KONG

Yes, there are explicit requirements for the ongoing surveillance of trading and compliance. These requirements include authorisation, audit trail and trade and market surveillance.

ITALY

Yes. Surveillance activity must be carried on by a separate Division of the exchange and independent from the board of the exchange. Surveillance department must also be adequate to the scope, in terms of employees and technical instruments of market analysis and control.

JAPAN – MOF

Yes. As a condition of exchange license, an exchange must, among other things: enforce all of its rules which have been approved by the MOF and the FSA and maintain and utilize a system to monitor trading to detect and to deter violations of the market's rules.

THE NETHERLANDS

Yes. As a condition for recognition an exchange must, among other things: enforce all of its rules which have been approved by the STE; enforce rules which provide minimum financial standards and related reporting and recordkeeping requirements for members and maintain and utilize a system to monitor trading to detect and to deter violations of the contract market's rules (market surveillance) committed in the making of trades and the execution of customer orders. The contract market also must be able to demonstrate its continuing compliance with the requirements for contract market designation, including a program that includes surveillance of market activity as well as trading practices.

SPAIN

Yes. The Supervision Division of the exchanges, that must have the technical and human resources to accomplish their duties, must carry out surveillance.

UNITED KINGDOM

To meet its obligation to ensure the orderly conduct of business and to enforce compliance with its rules, an exchange must be able to demonstrate to the FSA that it has effective arrangements for monitoring trading. The FSA would expect an exchange to meet the requirements of the IOSCO Principles.

UNITED STATES – CFTC

Yes. As a condition of contract market designation an exchange must, among other things: enforce all of its rules which have been approved by the CFTC; enforce rules which provide minimum financial standards and related reporting and recordkeeping requirements for member FCMs; and maintain and utilize a system to monitor trading to detect and to deter violations of the contract market's rules committed in the making of trades and the execution of customer orders. CEA section 5a(a). The contract market also must be able to demonstrate its continuing compliance with the requirements for contract market designation, including a program that includes surveillance of market activity as well as trading practices. CFTC rules 1.50-1.51

UNITED STATES – SEC

Yes. Although there are no explicit Commission requirements relating to screen based trading, exchanges must have adequate surveillance procedures to monitor for violations of the federal securities laws and the rules of the exchange. Exchanges also are subject to inspection and examination by Commission staff.

ARGENTINA

Yes. As a condition of futures market designation a market must, among other things: enforce all of its rules which have been approved by the CNV; enforce rules which provide minimum financial standards and related reporting and recordkeeping requirements for intermediaries; and maintain and utilize a system to monitor trading to detect and to deter violations of the contracts' rules committed in the making of trades and the execution of customer orders.

BRAZIL

Yes. CVM also requires intermediaries to present independent auditing reports to assure technical and economical conditions and compliance with Authorities' rules.

JAPAN – MITI/MAFF

Yes. As a condition of authorization, an exchange must, among other things: enforce all of its rules which have been reviewed and approved by the MAFF or MITI and maintain and utilize a system to monitor trading to detect and to deter violations of the market's rules.

MALAYSIA

N/A [due to the confidential nature of some of these arrangements]

SINGAPORE

When deciding whether to approve a body corporate as a Futures Exchange under section 4 of the FTA, MAS must be satisfied that its business rules provide that floor trading practices are fair and properly supervised; that adequate measures have been taken to prevent manipulation and excessive speculation; and that adequate provision has been made to record and publish details of trading. MAS may revoke any approval granted under section 4 if the exchange is operating in a manner detrimental to the public interest. In addition, the exchange can be required to enforce its business rules by an aggrieved person under section 10 FTA.

37. Please describe any specific market monitoring approaches you require for screen-based trading systems (or which you consider useful). Do you require real-time access (by the regulator) to trade data? If so, how is it used for surveillance purposes? Who else has real-time access to trade data?

Other than the minority of regulators who have access to real time trade data, the regulators do not describe any surveillance techniques that are unique to screen-trading systems.

The following jurisdictions report that the regulator having access to real time trade data: Australia, France, Germany, Hong Kong, Spain, Brazil and Malaysia.

AUSTRALIA

ASIC relies on the exchanges' involvement as SROs. As part of the authorisation process, ASIC requires the exchanges to conduct real time surveillance of trading on their markets. ASIC can obtain access to real time data if required.

CANADA – ONTARIO

Monitoring and enforcement is dealt with in the proposed regulatory framework for ATSS. Specifically, the framework rules, which are designed to ensure fair and orderly markets, provide that an exchange or ATS must monitor and enforce compliance. The monitoring and enforcement functions may be carried out directly by an ATS if it has been approved to do so (by the Commission) or through an agent if the agent has been approved to do so by the Commission. The agent must also enter into an agreement to coordinate the monitoring and enforcement functions.

CANADA-QUEBEC

Monitoring and enforcement is dealt with in the proposed regulatory framework for ATSS. Specifically, the framework rules, which are designed to ensure fair and orderly markets, provide that an exchange or ATS must monitor and enforce compliance. The monitoring and enforcement functions may be carried out directly by an ATS if it has been approved to do so (by the CVMQ) or through an agent if the agent has been approved to do so by the CVMQ. The agent must also enter into an agreement to co-ordinate the monitoring and enforcement functions.

FRANCE

The market surveillance division of the COB has access to real time data and is in a position to monitor the positions of each trading member second after second to detect potential market abuse, with the assistance of sophisticated automated search and alert systems.

GERMANY

The Market Supervision Board of the exchange has real-time access to all trading information as well as the exchange departments responsible for the operation of the market. According to the Exchange Act the Market Supervisory Board has to monitor all trading activities systematically and without exceptions. The State Exchange Supervisory Authority has access to this data, too.

HONG KONG

Yes. The SMART system provides real-time access to and analysis of trade data of the stock market, which is used for surveillance purposes. For the futures market, the SFC has installed a Click Workstation (OM Technology) to monitor the markets on real-time basis.

ITALY

Not applicable, as all Italian markets are screen-based.

JAPAN – MOF

The Securities and Exchange Surveillance Commission is in the place of monitoring trades in all exchanges, however not on the real-time basis. Exchanges have a self-regulatory obligation to monitor trades on real-time basis for possible wrongdoing. The Commission and exchanges monitor electronic trading in much the same way as they do for trades done by open outcry.

THE NETHERLANDS

Not applicable for screen-based derivatives trading.

SPAIN

Not specific market monitoring approaches are required, as all the Spanish derivatives markets are screen-based. The Supervision Division of the CNMV has the same computers and programs to monitor both trades and risk than the exchanges supervision departments. In fact the CNMV has the ability for knowing on line counterparts a feature unique for the exchanges and the CNMV.

UNITED KINGDOM

The FSA does not monitor markets itself and therefore has no need for access to real-time trade data. Exchanges carry the responsibility for monitoring market activity. They need to have monitoring arrangements that will assist them in maintaining orderly markets and detecting abuse of their trading rules. The FSA expects exchanges to have systems able to detect abnormal price movements or trading patterns, to provide alerts to the monitoring team and to make available sufficient information to enable the exchange to identify the source of trades.

UNITED STATES – CFTC

The CFTC does not require for itself real-time access to exchange systems. Exchanges nonetheless have a self-regulatory obligation to monitor all trading activity for possible wrongdoing. Exchanges monitor electronic trading in much the same way as they do for trades done by open outcry. In this regard, exchanges generally use the same automated surveillance systems to monitor screen-based trading, except that some of the reports generated by these systems are tailored to the unique characteristics of the particular electronic trading system.

UNITED STATES – SEC

See answer to #36.

ARGENTINA

At the moment, there are no CNV regulations regarding any specific market monitoring approaches for screen-based trading systems.

The CNV does not require for itself real-time access to exchange systems. Futures markets nonetheless have a self-regulatory obligation to monitor all trading activity for possible wrongdoing. They monitor electronic trading in much the same way as they do for trades done by open outcry. Data vendors have access to real time data.

BRAZIL

Yes. CVM requires real time access to trade data. Surveillance is made through filter systems and daily reports.

JAPAN – MITI/MAFF

MAFF or MITI does not require for itself real-time access to exchange systems. The exchange primarily has a self-regulatory obligation to monitor all trading activity at a real-time basis.

MALAYSIA

The Securities Commission and KLOFFE require real-time access to trade data, particularly in an active or volatile market. The following information are useful:-

- Active members and clients and their trading activities
- Status of open position of the Members and Clients

SINGAPORE

MAS does not require for itself real-time access to exchange systems. SIMEX, as a self-regulatory organisation, has been the front-line regulator with the capability of monitoring any possible wrongdoing on a real-time basis. The same surveillance platform is used to monitor both electronic and open-outcry trading.

38. If the facility provider is an SRO, do you periodically assess the efficiency of self-regulatory programs for monitoring screen-based trading?

The majority answered “yes.”

Jurisdictions responding “no” either are in the process of implementing a formal oversight program , review compliance but not “periodically,” or the question was “not applicable.”

AUSTRALIA

Not explicitly, but it is part of the ongoing process of overseeing the role of the SROs.

CANADA – ONTARIO

The Commission will be implementing a formal oversight program for an exchange in the near future which will include surveillance of trading.

CANADA-QUEBEC

The CVMQ is implementing a formal oversight program for an exchange which will include surveillance of trading.

FRANCE

Not periodically.

GERMANY

Yes. All exchanges are reviewed by the respective State Exchange Supervisory Authorities for compliance with their self-regulatory responsibilities.

HONG KONG

Only the SEHK and the HKFE are SROs in HK. The SFC periodically assesses these organisations. The ability to adequately monitor trading is one of the requirements of the compliance audit procedure.

ITALY

Not applicable.

JAPAN –MOF

Yes. All exchanges are under the oversight by the MOF and the FSA to ensure their self-regulatory responsibilities.

THE NETHERLANDS

No. The TSA system, the screen based system for the Stock Exchange, is not periodically reviewed by the STE for compliance with their self-regulatory responsibilities.

SPAIN

Not applicable.

UNITED KINGDOM

The FSA reviews market monitoring as part of its regular meeting programme with exchanges. The FSA may review monitoring on a more in-depth basis through periodic projects.

UNITED STATES – CFTC

Yes. All contract markets are periodically reviewed by the CFTC for compliance with their self-regulatory responsibilities.

UNITED STATES – SEC

Yes. The SROs are subject to inspection and examination by Commission staff.

ARGENTINA

Yes. All futures markets are periodically reviewed by the CNV for compliance with their self-regulatory responsibilities.

BRAZIL

Yes.

JAPAN –MITI/MAFF

Yes. All exchanges are reviewed by the MAFF or MITI for compliance with their self-regulatory responsibilities.

MALAYSIA

N/A

SINGAPORE

Yes. SIMEX is supervised by MAS on an on-going basis to ensure that they fulfil their self-regulatory responsibilities.

Coordination with pit trading

39. Do you permit exchanges to operate screen-based trading in conjunction with off-screen trading (whether pit or ‘upstairs’ trading). If so, please describe any requirements you impose to ensure that price formation remains unified

This question applies only to those jurisdictions that have both open outcry as well as electronic systems. In this regard, seven jurisdictions report that their exchanges are solely electronic.

Seven respondents with open outcry and electronic trading responded “yes” to this question.

AUSTRALIA

No.

CANADA – ONTARIO

Equity trading (on The Toronto Stock Exchange) is currently electronic in Ontario. The Toronto Futures Exchange currently trades on a floor, however, it is intended that this be converted to electronic trading in the future.

CANADA-QUEBEC

Equity trading is currently electronic at the Montréal Exchange. Derivatives trading however, is still open-outcry. It is intended that the derivatives trading be converted to electronic trading in the future.

FRANCE

Currently, the screen based futures and options exchanges operate only electronically. In the past, the COB and the CMF have permitted MATIF to operate side by side trading (i.e. electronically + pit). This one year experience showed that real time information provided to market participants on the price of the contracts traded contributed to “unified” prices on the two trading systems.

GERMANY

No requirements, since there is only screen-based trading (no pit trading).

HONG KONG

Yes, exchanges are permitted to simultaneously maintain screen-based and off-screen trading, however *different products are traded* on the respective mediums, therefore there are no related difficulties in price formation.

ITALY

Not applicable. See answer no. 37.

JAPAN – MOF

To date, there is no case of the same product trades side-by-side electronically and in a pit.

THE NETHERLANDS

Not applicable.

SPAIN

Not applicable. There is not pit trade in the Spanish derivatives markets.

UNITED KINGDOM

Yes. The exchange is required to ensure that the conduct of business remains orderly. Where screen and pit trade in parallel, screens are visible to pit traders and screen traders will have a feed of pit trades.

UNITED STATES – CFTC

Yes. There are no requirements, however, that we impose to ensure that price formation remains unified. Insofar as the same product trades side-by-side electronically and in a pit and all prices are transparent there generally should be “unified” prices.

UNITED STATES – SEC

Yes. National securities exchanges are expected to participate in market-wide transaction and quotation reporting plans. Additionally, exchanges participate in the Intermarket Trading System providing trading links between market centers and enabling a broker-dealer, participating in one market, to execute orders on another market. See Securities Exchange Act Release Nos. 37191 (May 9, 1996), 61 FR 24842 (May 16, 1996); 17532 (Feb. 10, 1981), 46 FR 12919 (Feb. 18, 1981); 23365 (June 23, 1986), 51 FR 23865 (July 1, 1986); 18713 (May 6, 1982) 47 FR 20413 (May 12, 1982); 28874 (Feb. 12, 1991), 56 FR 6889 (Feb. 20, 1991).

ARGENTINA

Yes. There are no specific requirements CNV imposes to ensure that price formation remains unified. CNV conducts periodical audit trails to ensure price formation remains unified.

BRAZIL

Yes, there are no specific rules concerning dual trading. But CVM requires the exchange to set up clear rules on price formation within its jurisdiction.

JAPAN - MITI/MAFF

There are no special requirements. Currently, no exchange has applied for approval of both screen-based trading and off-screen trading for same contract.

MALAYSIA

Currently no domestic exchange operates on this basis. Any such system would be subject to the approval of the Commission and satisfactory amendments to the rules of the exchanges.

SINGAPORE

Yes, but only for after-hours trading in certain contracts. At the moment, none of the contracts operate concurrent electronic and open-outcry trading.

Market abuse

40. Are there any market abuses that you consider need to be addressed in particular with regard to screen-based trading systems? If so, please describe.

Singapore identified a unique abuse related to user identification. Hong Kong reported unique security concerns but agreed that abuses in general are similar to other forms of trading. The UK noted that screen-based systems may be more open to wash trades and attempts to manipulate the closing price.

The remaining jurisdictions reported no abuses particular to electronic trading.

AUSTRALIA

No.

CANADA – ONTARIO

No particular types of market abuse are considered to be exclusive to screen-based trading.

CANADA-QUEBEC

No particular types of market abuse are considered to be exclusive to screen-based trading.

FRANCE

No.

GERMANY

No.

HONG KONG

In terms of market abuse, while there are security problems that are unique to screen-based trading most regulatory problems are the same as for floor-trading.

ITALY

No particular types of market abuse are considered to be exclusive to screen-based systems.

JAPAN – MOF

No particular types of market abuse are exclusive to screen-based, as opposed to open outcry, trading.

THE NETHERLANDS

No particular types of market abuse are exclusive to screen-based, as opposed to open outcry, trading.

SPAIN

No particular types of market abuse are considered to be exclusive to screen-based systems.

UNITED KINGDOM

Screen based systems may be more open to wash trades and attempts to manipulate the closing price. In addition, collusion may be easier in offices than in the pit. On the other hand, pricing transparency and electronic audit trails should help to deter abuse.

UNITED STATES – CFTC

No particular types of market abuse are exclusive to screen-based, as opposed to open outcry, trading.

UNITED STATES – SEC

The Commission is currently reviewing electronic trading issues generally but has not identified any particular market abuses in this area.

ARGENTINA

No.

BRAZIL

No, experience with screen-based systems is still very restricted by low volume and few contracts.

JAPAN – MITI/MAFF

No particular types of market abuse are exclusive to screen-based, as opposed to open outcry, trading.

MALAYSIA

User-ID abuses (eg due to sharing of passwords), unauthorised access

SINGAPORE

No

Trading linkages

41.

- d) Describe your approach to the examination, review or approval of linkages between screen-based trading systems.**
- e) How do you approach linkages where products of multiple electronic systems are traded on one dedicated system?**
- f) How do you approach linkages where products of multiple electronic systems can be accessed through multiple applications operating on a personal computer.**
- d) *Do you permit self-regulatory responsibilities to be delegated or contracted to other exchanges or regulatory authorities?***

(a) Those jurisdictions which had experience with trading linkages report that they basically review the arrangement for market and customer protection purposes.

(b) and (c) : No unique requirements were described; such arrangements would be reviewed on a case-by-case basis under existing review procedures.

(d) France and the US (SEC and CFTC) permit such delegation of self-regulatory responsibilities by SROs.

AUSTRALIA

- a) ASIC's only experience has been with SYCOM's linkage with NYMEX.
- b) ASIC's experience is with SYCOM which feeds orders through the SYCOM terminal to NYMEX.
- c) ASIC has not had to consider this aspect.

d) Not so far.

CANADA – ONTARIO

In the proposed regulatory framework, we are proposing that certain information to be provided by an ATS or an exchange to the data consolidator (to be selected pursuant to a request for proposal). Data consolidation ensures that all participants in the market have access to full and complete information regarding the securities that they wish to trade. It includes both pre-trade and post-trade information. We are also proposing that an ATS and an exchange comply with the requirements of the market integrator to provide access to orders displayed through the data consolidator. Market integration means that any buyer or seller in a participating system will have the right and the facility to access the best price offered or bid in any participating systems, regardless of whether the buyer or seller is a member of that system or not.

CANADA-QUEBEC

In the proposed regulatory framework, we are proposing that certain information to be provided by an ATS or an exchange to the data consolidator (to be selected pursuant to a request for proposal). Data consolidation ensures that all participants in the market have access to full and complete information regarding the securities that they wish to trade. It includes both pre-trade and post-trade information. We are also proposing that an ATS and an exchange comply with the requirements of the market integrator to provide access to orders displayed through the data consolidator. Market integration means that any buyer or seller in a participating system will have the right and the facility to access the best price offered or bid in any participating systems, regardless of whether the buyer or seller is a member of that system or not.

FRANCE

a) A linkage between a French regulated market and a foreign exchange (which is not an EEA regulated market) would require the prior recognition of that foreign exchange by the Ministry of Finance, after the opinion of the COB is being sought, except if that foreign exchange is a regulated market under the investment services directive. It would also require that an information sharing arrangement be in place between the COB and the domestic competent regulator or that foreign exchange. The primary concern would be investor protection and reciprocity. A foreign market may be recognized only if it provides a level of investor protection similar to the one available under France laws and regulations. European Economic Area regulated markets are already considered to be “recognised” markets(the French authorities rely on the authorization procedure of the domestic competent authority

Where such linkage would also include a cross membership arrangements, the CMF would have to approve such arrangement to make sure that the intermediaries that will be trading on a French regulated markets meet appropriate standards (see also answer on remote members). A trading linkage with a domestic or a foreign exchange may also be reviewed by the COB and the CMF through the relevant amendments to the market rules.

b) and c) (The scope and the underlying concern of these two questions are unclear).

d) Under the General regulation of the CMF, an exchange may delegate some of its responsibilities (organization of transactions, disclosure of trades ...) to another exchange or to a company in which the exchange has a majority shareholding, with the prior consent of the CMF. However, this is not specific to trading linkages.

GERMANY

a) - b) Linkages must not conflict with German rules and regulations and the competencies of German authorities. There is a common trading platform of Eurex Deutschland (Germany) and Eurex Zurich (Switzerland). The two exchanges have harmonised their rules and regulations which have been approved by the German and Swiss authorities (e.g. they use a common Exchange Regulation in German language. However, they are available in English, too).

The BAWe and the Swiss Banking Commission agreed on the exchange of confidential information.

c) -

d) Not applicable.

HONG KONG

- a) Not Applicable
- b) Not Applicable
- c) Not Applicable
- d) Not Applicable

ITALY

- (a) According to Testo Unico, trading linkage between a foreign and a domestic market should be disclosed to Consob. In such cases Consob evaluates the adequacy of the linkage to preserve market integrity, transparency, orderly trading and investors protection. Furthermore, market rule amendment should be authorized by Consob.
 - (b), (c) According to Testo Unico, to extend its scope in Italy, a foreign market must be recognized by Consob and entered in the “regulated market list”. UE foreign markets are recognized pursuant to Community Directives while non-UE foreign market are authorized by Consob after concluding agreements with the corresponding foreign authority. In the case of a dedicated electronic system, it must be recognized as a regulated market.
- No. Each exchange must be responsible for the supervision of the activity

JAPAN – MOF

a)b)c)d) There are no example of such cases.

THE NETHERLANDS

Not applicable

SPAIN

- (a) The Government, previous CNMV request, must approve trading linkages between foreign and Spanish markets. Market integrity, customer protection and transparency on member risks, are- among others- the standards that foreign exchanges and contracts should meet.
 - (b) and (c) There are no particular standards with respect to, since there are not previous experience.
 - (d) Up to date, segregation of responsibilities is clearly delimited. In the case of the MEFF-MATIF agreement, on cross-listing contracts:
 - When the contracts are launched by MATIFF, therefore the French exchange is the primary responsible for supervision.
- When the contracts are launched by MEFF, therefore the Spanish Exchange is the primary responsible for supervision.

UNITED KINGDOM

- a) An exchange proposing to establish a linkage with another exchange must be able to satisfy the FSA that the arrangements will ensure the orderly conduct of business and proper protection of investors.
- b)/c) The FSA favours a rational allocation of monitoring responsibilities where products are shared i.e. “home” market responsible for “home” products. (This does not affect the legal status of the trades or other regulatory responsibilities.)
- d) Yes. See above.

UNITED STATES – CFTC

- (a) A trading linkage between a US contract market and another exchange (foreign or domestic) would be presented to the CFTC as a rule proposal by a contract market. As such, the rule would be reviewed under section 5a(a)(12) and CFTC rule 1.41 for general compliance with relevant CEA provisions and CFTC rules. A primary concern would be to ensure consistent and adequate customer and market protections. See questions 8 and 9.
- (b) There are no particular standards with respect to the trading of multiple products on one dedicated system. CFTC’s primary concern is ensuring that market participants trading the products of US exchanges are subject to sufficient and effective oversight.
- (c) See (a). Each arrangement would be reviewed individually.

(d) Yes. As with floor-trading, the CFTC permits such allocation of supervisory responsibilities (subject to CFTC review and approval). For example, the CFTC has approved a Joint Audit Plan whereby one exchange functions as the designated SRO for members with multiple exchange affiliations. The CFTC has adopted a lead regulator concept in connection with cross-exchange access proposals whereby the “home regulator” is responsible for enforcing the rules of the exchange whose products are being traded pursuant to the cross-exchange access program. (See CME-Matiff Cross-Exchange Access Program.)

UNITED STATES – SEC

- a) Not applicable. If developed, these linkages would need to be approved by the Commission through the rule filing process.
- b) See above.
- c) See above.
- d) Yes. See Exchange Release Section IV.B.

ARGENTINA

- a) At the moment there are no rules or regulations regarding this issue. However, a trading linkage between an Argentine futures market and another market (foreign or domestic) would be presented to the CNV as a rule proposal by a futures market. As such, the rule would be reviewed by the CNV for approval.
- b) There are no particular standards with respect to the trading of multiple products on one dedicated system.
- c) There are no rules regarding this issue, and currently no entity in Argentina has presented such a proposal for approval.
- d) There are no rules regarding this issue, and currently no entity in Argentina has presented such a proposal for approval.

BRAZIL

- a) CVM has to authorize any link between screen-based trading systems and the analysis is based on transparency, fairness and consistency.
- b) No specific rules.
- c) No specific rules.
- d) No.

JAPAN – MITI/MAFF

(a),(b),(c): There are no example of such cases.

MALAYSIA

N/A. No linkages

SINGAPORE

- (a) MAS requires all information pertaining to electronic trading systems as well as to the exchange structure and its clearing/guaranteeing functions to be described and submitted in sufficient detail (for consideration).
- (b) Each exchange’s products will be assessed and evaluated separately, and therefore different exchanges will need individual and specific application to the MAS.
- (c) Sections 2, 3 and 4 FTA specifically define a need for a foreign market operating an electronic facility to channel orders, execute transactions or make a market in the exchange’s products to submit an application to the MAS for it to be recognized as a foreign exchange operating in Singapore.
- (d) No. Insofar as foreign exchanges operating in Singapore are concerned, the MAS does not permit self-regulation.

Foreign exchanges

- 42. Do different regulatory procedures or requirements apply to foreign electronic trading systems seeking to provide persons/firms in your country with access to its trading system via membership or other form of participation? If so:**
- b) Please describe the factors that cause you to determine that a system is “foreign;” and**

b) Please describe briefly the process for system approval or authorization (only if process is different than the review above.)

All jurisdictions require the explicit recognition of foreign systems, either through formal exchange authorization procedures, reciprocal recognition arrangements (EU countries), or through a review and recognition process addressing specifically foreign systems (e.g. staff procedures at CFTC).

Those jurisdictions which responded to (b) essentially characterize a non-domestic server as a “foreign” system.

Regarding process, all jurisdictions require the submission of regulatory data.

AUSTRALIA

Such systems would require authorisation similar to Australia, but ASIC would take into account any ongoing authorisation or supervision by another regulator.

- a) N/A
- b) ASIC requires the applicant to document the authorisation / supervision process it is already subject to, reviews that against the requirements imposed on Australian markets, and discusses sharing regulation with the existing regulator.

CANADA – ONTARIO

If a registrant in Ontario wanted to be a member of a foreign exchange with direct access to the foreign exchange, we would consider it to be operating a branch of the exchange which would subject such exchange to regulatory oversight in Ontario. If a registrant wanted access to a foreign exchange, we would require the registrant to act through a member in the foreign jurisdiction (jitney transaction.

- (a) The factors that cause us to determine that a system is foreign depends on the location of a system outside of Ontario. However, there are other factors (other than a non-domestic server) in determining whether a system is foreign including where a system is operating, how a system is operating, where access is provided and where participants are located).
- (b) A system that was seeking approval to operate would have the choice to be recognized as an exchange, be a member of an exchange or register as a dealer with the Commission and be subject to additional requirements.

CANADA-QUEBEC

If a registrant in Quebec wanted to be a member of a foreign exchange with direct access to the foreign exchange, we would consider it to be operating a branch of the exchange which would subject such exchange to regulatory oversight in Quebec. If a registrant wanted access to a foreign exchange, we would require the registrant to act through a member in the foreign jurisdiction (jitney transaction.

- (a) The factors that cause us to determine that a system is foreign depends on the location of a system outside of Quebec. However, there are other factors (other than a non-domestic server) in determining whether a system is foreign including where a system is operating, how a system is operating, where access is provided and where participants are located).
- (b) A system that was seeking approval to operate would have the choice to be recognized as an exchange, be a member of an exchange or register as a dealer with the CVMQ and be subject to additional requirements.

FRANCE

For screen based trading system under the jurisdiction of a non EEA country, see answer to 41.

GERMANY

- According to the European Investment Services Directive, foreign regulated markets originating from the European Union (EU) or the European Economic Area (EEA) are free to set up their systems in other countries of the EU or the EEA. The applied principal is minimum harmonisation and mutual recognition of rules and regulation.
- The approach of German authorities is to ask for a detailed description of the activities and services planned by the foreign exchange. While the State Supervisory Authorities have to examine whether the foreign exchange needs approval according to the German Exchange Act, the BAWe examines whether the intended activities comply with the German Securities Trading Act.

HONG KONG

Yes.

- a) A system is considered “foreign” if the host system is outside HK.

ITALY

a) Consob has to include markets recognized pursuant to Community law (i.e. ISD Directive) in a special section of the list of regulated markets. In this case there is a sort of mutual recognition of markets and Consob is not in charge of any further control.

b) In case of a “not regulated market” (i.e. non-EU market or particular cases of not-regulated EU market, as markets for derivatives on commodities which are not covered by the ISD directive), Consob, after concluding agreements with the corresponding authorities, may **recognize** these markets for the purpose of extending the scope of their operations in Italy (mainly by offering screens to remotely access the market)

JAPAN – MOF

To date, the license system described above has been applied only to Japanese exchanges, and the MOF and the FSA have been required foreign exchanges to assure of abiding by some requirements, including, but not limited to, some of the ones mentioned above, when providing their terminals within Japan.

THE NETHERLANDS

- a. Any exchange established abroad is regarded as foreign.
- b. The foreign exchange must be recognised by the Ministry of Finance and must meet the standards mentioned in answer 9. Foreign exchanges which are “regulated markets” in the sense of the ISD, are exempted.

SPAIN

There are not specific procedures or requirements applied to foreign electronic systems. The CNMV authorizes Collective Investment Funds (under the CNMV supervision) to invest in foreign markets. These eligible markets must meet transparency, equal access and regular functioning criteria. CNMV keeps an up- date list of these authorized foreign markets.

UNITED KINGDOM

The UK is required, under the EU’s Investment Services Directive, to grant access to any EU exchange listed as a ‘regulated market’ to enable it to place screens in the UK and to have UK members. (N.B. exchanges may be listed as ‘regulated markets’ only in respect of the markets they operate in securities or financial derivatives, not commodity derivatives, which are not covered by the ISD.).

The regulatory procedures applicable to any other foreign exchange will depend on whether or not it wishes to maintain a permanent place of business, or conduct investment business, in the UK. Where it wishes to maintain a permanent place of business in the UK, it will need to apply to HM Treasury for recognition as an Overseas Recognised Investment Exchange.

A trading system without a place of business in the UK may place screens in the UK without being deemed to be conducting investment business in the UK. Certain restrictions apply in such cases and the exchange would also need to comply with financial promotion requirements set out in the FS Act and regulations.

UNITED STATES – CFTC

The CFTC’s approach has been to permit staff no-action criteria control the placement of foreign screen-systems in the US pending further development of rules or guidelines.

UNITED STATES – SEC

No. Foreign electronic trading systems accessing U.S. investors would need to comply with the same requirements as domestic electronic trading systems. But see Rule 15a-6 (exemptions for foreign broker-dealers).

ARGENTINA

As noted in answer i below, at the moment there are no laws, rules or regulations specifically addressing electronic screen-based trading systems.

As a general principle, according to Section 80 and 83 of Decree #2284/91 as ratified by Section 29 of Law 24.307, every person or entity involved in “public offering” of futures and options contracts in Argentine jurisdiction, either by open outcry or by electronic screen-based trading, must be previously approved by the National Securities Commission (Comisión Nacional de Valores, CNV).

Thus, any rules submitted this by this persons or entities (either nationals or foreigners) regarding the implementation of screen trading systems would be reviewed and approved by the CNV.

For the purpose of the CNV approval foreign systems would be treated as local systems.

BRAZIL

a) If the firm does not have an established branch in Brazil, it is considered foreign and it is not allowed to operate directly on the Brazilian Securities Markets.

b) There is only one procedure to authorize a system.

JAPAN – MITI/MAFF

In order to insure the fairness of transactions and the protection of investors, the MAFF or MITI have required foreign exchanges not to provide their terminals to any entities without registration or review. (Furthermore, if foreign exchanges’ trading activities through their terminals in Japan reach a certain level, such exchanges are no longer considered as foreign exchanges and required to be designated as domestic commodity futures exchanges by MAFF or MITI.)

MALAYSIA

The Futures Industry Act 1993 prohibits the operation and maintenance of a futures market except

- (1) By an approved exchange company, which must a company incorporated in Malaysia or
- (2) Where it is an exempt futures market.

SINGAPORE

No. Section 2 FTA applies to any electronic system, whether operating in Singapore or elsewhere, through which trading in futures contracts is carried out.

43. **If different procedures/requirements exist, describe the specific topics that are examined when reviewing the authorization of foreign systems or foreign system access and explain the rationale for such different procedures or requirements.**

Note: Responses are needed only to the extent the process or the requirements for foreign systems are different than as described in questions 11-41 above. If any such responses are different for foreign systems, please identify the question number and explain the difference in your response to question #43. Please state expressly if the requirements are the same.

No unique requirements were reported. The review/authorization inquiry appears to track generally the inquiry used by respondents in examining domestic systems.

Hong Kong makes clear that there are no approval requirements on the system itself (as is likely the case in other jurisdictions).

AUSTRALIA

The requirements are the same.

CANADA – ONTARIO

See above (question 42).

CANADA-QUEBEC

See above (question 42).

FRANCE

See answer to 41.

GERMANY

N.A.

HONG KONG

There are no approval requirements on the systems used, however information is sought on the HK participants and their trading volumes.

ITALY

In the b) case, Consob shall verify that the information regarding securities and issuers, the methods of price formation and clearing and settlement of securities, the laws and regulations governing the supervision of markets and intermediaries are equivalent to those in force in Italy and in any case able to ensure adequate protection to investors.

JAPAN – MOF

See answer to 42.

THE NETHERLANDS

Not applicable.

SPAIN

N/A

UNITED KINGDOM

Where a foreign exchange seeks recognition as an ORIE, it must satisfy HM Treasury, inter alia, that it is subject to equivalent regulation in its own country.

UNITED STATES – CFTC

The staff no-action procedure basically examines aspects of regulatory structure applicable to trading on the system, and extent of compliance with IOSCO 1990 principles, and requires adequate information sharing.

UNITED STATES – SEC

The requirements are the same. See also Rule 15a-6 (exemptions for foreign broker-dealers).

ARGENTINA

See answer to questions N° 42 above

BRAZIL

Not applicable.

JAPAN – MITI/MAFF

See answer to item #42.

MALAYSIA

N/A

SINGAPORE

44. **Do you have any requirements concerning foreign electronic trading systems providing remote membership/ participation to regulated firms in your jurisdiction or firms accessing such foreign systems from your jurisdiction? Please describe.**

The majority of jurisdictions require some form of authorization for remote membership which some respondents characterized as operating a market in their jurisdiction (*see* Australia and Canada).

Canada explicitly would prohibit a registered firm from operating as a remote member; such conduct would require authorization as an exchange or an exemption from recognition as an exchange. Compare the Netherlands which permits the firm to apply for broker-dealer status.

AUSTRALIA

ASIC currently considers that foreign electronic trading systems providing remote membership/ participation to regulated firms in your jurisdiction would be conducting a market in Australia and would require authorisation in Australia. Such authorisation would be similar to the process required by existing markets.

However, ASIC considers that authorisation, and adequate supervision, by another regulator would be a material factor to consider in any cross border application for authorisation.

CANADA – ONTARIO

Yes. A registered firm in Ontario cannot operate as a member of a foreign system. Operating as a member with direct access to a foreign exchange or formal dealer market is considered to be operating a branch of the exchange which would subject such exchange to regulatory oversight in Canada.

CANADA-QUEBEC

Yes. A registered firm in Quebec cannot operate as a member of a foreign system. Operating as a member with direct access to a foreign exchange or formal dealer market is considered to be operating a branch of the exchange which would subject such exchange to regulatory oversight in Canada.

FRANCE

Foreign electronic trading systems providing remote membership to regulated firms in France must be recognized by the Ministry of Finance upon advice of the COB. When formulating its advice to the Ministry of Finance, the Commission will review the rules of the exchange to appreciate whether they will provide to French investors trading on that system the same level of protection as the one they would be granted with when trading on a regulated market recognized as such by the French competent authorities.

This does not apply for EEA regulated markets.

GERMANY

See No. 42.

HONG KONG

Foreign electronic trading systems providing remote membership/ participation to regulated firms in this jurisdiction or firms accessing such foreign systems from this jurisdiction must provide information on HK participants and their trading volumes.

ITALY

No. They have to follow the above procedure [#43].

JAPAN – MOF

See answer to 42.

THE NETHERLANDS

Yes, when these systems are not Exchanges in the sense of section 22 of the Act on the Supervision of Securities Trade 1995 (Wte 1995), they may apply for the broker-dealer status.

SPAIN

No

UNITED KINGDOM

Foreign electronic trading systems which are exchanges are dealt with above. For a FETS which is not an exchange the first question is whether it is doing investment business in the UK. If it is not, then there are no regulatory requirements for the FETS, but it must conduct its activities in compliance with the investment advertisement and cold calling requirements. There are no specific requirements relating to whether a UK person can access or become a member of a FETS, though the regulatory status of the FETS may affect the firm's capital requirements.

UNITED STATES – CFTC

There are no specific requirements beyond the no-action process (see 42).

UNITED STATES – SEC

There are no specific requirements applicable to foreign electronic systems, although Commission staff currently is reviewing foreign market access issues. Activities of foreign exchanges or electronic trading systems with respect to U.S. persons may subject them to registration under the Exchange Act.

ARGENTINA

No.

BRAZIL

Not applicable.

JAPAN – MITI/MAFF

See answer to item #42.

MALAYSIA

The Futures Industry Act 1993 prohibits futures brokers and futures fund managers from trading in a futures market outside Malaysia unless it is a futures market that has been prescribed to be a “Specified Exchange” by the Minister of Finance, and in respect of futures contracts of a class that has been approved.

SINGAPORE

Under section 2 FTA, any electronic system, whether operating in Singapore or elsewhere, which provides price information and channels orders for futures contracts would be deemed to be a futures market. This requires MAS approval.

- 45. Do you have any requirements concerning foreign electronic trading systems providing remote membership/ participation to unregulated entities/persons in your jurisdiction? Please describe.**

There do not appear to be requirements unique to the provision of remote membership to unregulated entities or firms. The provision of remote membership/participation to a registered or unregistered firm would require authorization as described in 42-44 above.

AUSTRALIA

See answer 44 above. ASIC would not make any distinction between systems offering a market to regulated or unregulated entities or persons in Australia.

CANADA – ONTARIO

If an unregulated person undertook any trading activity, registration in Ontario would be required. There are additional considerations (see question 42) in respect of membership and access to a foreign exchange.

CANADA-QUEBEC

If an unregulated person undertook any trading activity, registration in Quebec would be required. There are additional considerations (see question 42) in respect of membership and access to a foreign exchange.

FRANCE

Under the Modernization of Financial Activities Act, no person or entity may engage in an investment service as defined under the act, including execution of orders for third parties, as his/her main business without being registered and regulated as an investment service provider.

GERMANY

See No. 42.

HONG KONG

As above. [#44]

ITALY

No.

JAPAN – MOF

To date, the MOF and the FSA have required foreign exchanges not to provide their terminals to any entities without required registration or authorization under the Japanese law.

THE NETHERLANDS

These foreign trading systems are either recognised exchanges (or are exempted as a “regulated market”) or regulated investment firms. If the foreign trading system is a recognised exchange, only regulated entities may trade on this exchange.

SPAIN

No

UNITED KINGDOM

Any foreign electronic trading system wishing to admit unregulated UK entities would need to comply with the financial advertising and promotion regulations. These restrict the ability of persons - domestic or foreign - to promote their business to non-authorized persons in the UK.

UNITED STATES – CFTC

There are no specific requirements beyond the no-action process (see 42).

UNITED STATES – SEC

See above. [44]

ARGENTINA

No.

BRAZIL

No.

JAPAN – MITI/MAFF

See answer to item #42.

MALAYSIA

Generally, no.

SINGAPORE

Our current laws do not draw a distinction between regulated and unregulated entities.

Cross-order coordination

- 46. Please describe what arrangements you have implemented to supervise cross-border systems (e.g., information-sharing lead-regulator or other arrangements for allocating regulatory and/or self-regulatory oversight. Do you divide specific supervisory responsibilities between jurisdictions where the participants are located and where the system is deemed to be located?**

General regulatory cooperation and information sharing are addressed by memoranda of understanding (MOUs).

The following jurisdictions reported allocation of responsibility arrangements: France, Germany, Italy, the Netherlands, and the United States CFTC. See also Spain and Malaysia which consider the foreign exchange as having the primary responsibility for supervising its operations.

AUSTRALIA

ASIC has entered into a number of MOUs with other regulators to provide general regulatory cooperation. However, it does not currently have specific agreements with any other regulators in regard to cross border supervision of trading systems.

CANADA – ONTARIO

None.

CANADA-QUEBEC

None.

FRANCE

When the COB approved the CMF-MATIF cross-exchange trading in which the products of one exchange could be traded by a member of the other exchange, the COB and the CFTC approved an arrangement whereby the local exchange, subject to oversight by the local regulator, took responsibility for the enforcement of local exchange rules in relation to trading by the “foreign” exchange member. In addition, appropriate information sharing arrangements were entered to assure access to necessary information.

GERMANY

When German authorities approved the common trading platform of Eurex Deutschland and Eurex Zurich, the BAWe and the Swiss Banking Commission approved an arrangement whereby the local exchange, subject to supervision by the local regulator, took responsibility for the enforcement of local exchange rules.

Rules and regulations of both exchanges have been harmonised and approved by the authorities (e.g. there is only one Exchange Regulation for both Eurex Deutschland and Eurex Zurich).

In addition, appropriate information sharing arrangements were entered to assure access to necessary information (exchange of letters between BAWe and Swiss Banking Commission in Sept. 1998).

German authorities are responsible for the supervision of Eurex Deutschland, Swiss authorities are responsible for the supervision of Eurex Zurich.

HONG KONG

- a) Bilateral and multilateral MOUs have been implemented to facilitate cross-border supervision.
- b) Supervisory responsibilities vary according to the details of individual MOUS.

ITALY

The primary responsibilities of supervision (e.g. the orderly functioning of the market and fair trading, in particular insider trading and market manipulation) should rest upon the supervisory authority of the country that authorises the market.

JAPAN – MOF

To date, there is no specific arrangement to supervise cross-border systems. While, participants of such systems are subject to supervision of the FSA, and in general the MOF and the FSA can exchange information with relevant foreign supervisors under certain conditions.

THE NETHERLANDS

When the STE approves “cross-exchange” trading (the products of one exchange can be traded by a member of the other exchange), the STE and the foreign supervisor will close an arrangement (if it concerns an exchange which is not an regulated market as defined in the ISD directive) whereby the local exchange, subject to oversight by the local regulator, will be responsible for the enforcement of local exchange rules in relation to trading by the “foreign” exchange member . In addition, appropriate information sharing arrangements will be entered to assure access to necessary information.

Coöperation between supervisors, and the exchange of information between supervisors, has been regulated (compulsory) in the ISD-EU directive.

SPAIN

There are not specific agreements. As it is pointed out in 41.d., each Exchange is the first responsible for supervision of its own contacts.

UNITED KINGDOM

Our supervisory approach to cross-border systems is to concentrate on ensuring that there are no gaps in supervision. We consider it particularly important to ensure that one exchange acts as lead regulator for each product. This requires that exchange to have a full data set for, and to monitor, any products for which it is in the lead.

UNITED STATES – CFTC

When the CFTC approved the CME-MATIF “cross-exchange” trading in which the products of one exchange could be traded by a member of the other exchange, the CFTC and French COB approved an arrangement whereby the local exchange, subject to oversight by the local regulator, took responsibility for the enforcement of local exchange rules in relation to trading by the “foreign” exchange member . In addition, appropriate information sharing arrangements were entered to assure access to necessary information. In effect, the CFTC and COB agreed to an allocation of supervisory responsibilities.

UNITED STATES – SEC

None specifically directed at cross-border systems. The Commission has entered into various general information sharing agreements with foreign regulators.

ARGENTINA

CNV has signed Agreements and MOUs with regulatory agencies from other countries and also the “Declaration on Cooperation and Supervision covering International Futures Markets”.

This are general agreements for the purpose of assistance and information sharing, but not specifically regarding the supervision of cross-border systems..

BRAZIL

There is no cross-border system established to date. In Brazil CVM has also two branches that are located respectively in Brasília and São Paulo, besides the head office in Rio de Janeiro. There is some supervisory responsibilities division between these branches but they work very connected and sharing information and resources.

JAPAN – MITI/MAFF

None.

MALAYSIA

The Securities Commission has arrangements for information sharing with the relevant regulators with several countries.

SINGAPORE

The MAS views the responsibility of operating the foreign-based electronic trading system as that of the foreign exchange itself and its regulatory body, which must provide a fair and high quality electronic facility.

Therefore, it does not take into account the physical location of other market participants, or of the exchange’s electronic trading facilities.

IOSCO Principles

- 47. Please identify any areas where you consider that the existing IOSCO principles could usefully be amended, added to or expanded. If any issues are identified, please note how you would modify the 1990 Principles to address that issue in the space provided in the cell to the right of the Principle copied below.**

Principle 1. [Applicable Regulatory Standards]

The system sponsor should be able to demonstrate to the relevant regulatory authorities that the system meets and continues to meet applicable legal standards, regulatory policies, and/or market custom or practice where relevant.

Principle 2. [Transparency]

The system should be designed to ensure the equitable availability of accurate and timely trade and quotation information to all system participants and the system sponsor should be able to describe to the relevant regulatory authorities the processing, prioritisation, and display of quotation within the system.

CANADA-ONTARIO

Currently, there are some non-disclosure systems (e.g., OptiMark). *In the proposed regulatory framework for ATSS, we are proposing not to require non-disclosure systems to disclose quote information to the data consolidator.*

CANADA-QUEBEC

Currently, the Securities Act requires that constituting by-laws and operating rules of an organization provided for equal access to services for every member.

In the proposed regulatory framework for ATSS, we are proposing not to require non-disclosure systems to disclose quote information to the data consolidator.

Principle 3. [Order Execution Algorithm]

The system sponsor should be able to describe to the relevant regulatory authorities the order execution algorithm used by the system, i.e., the set of rules governing the processing, including prioritisation, and execution of orders.

AUSTRALIA

While this principle remains appropriate, it should commence with similar words to Principle 2. The operator should be under an obligation to actually explain to the regulator, rather than merely being in a position to explain.

Principle 4. [Operational Issues]

From a technical perspective, the system should be designed to operate in a manner which is equitable to all market participants and any differences in treatment among classes of participants should be identified and explained.

AUSTRALIA

While this principle remains appropriate the operator should be under an obligation to demonstrate to the regulator that the system is equitable.

HONG KONG

These differences should also be transparent to all market participants.

Principle 5. [System Vulnerability]

Before implementation, and on a periodic basis thereafter, the system and system interfaces should be subject to an objective risk assessment to identify vulnerabilities (e.g., the risk of unauthorised access, internal failures, human errors, attacks, capacity and natural catastrophes) which may exist in the system design, development, or implementation.

AUSTRALIA

While this principle remains appropriate and effective, it should require the operator to provide a report to the regulator on the objective assessment. The assessment should be by, or be reviewed by, an independent, expert body.

CANADA – ONTARIO and QUEBEC:

In the proposed regulatory framework for ATSS, we are proposing that system vulnerability should only be reviewed once an ATS reaches 20% of the trading in a class of securities. In Ontario, for exchanges, there is no threshold percentage that must be reached. Systems capacity requirements will apply to all exchanges.

Principle 6. [Standards of System Access]

Procedures should be established to ensure the competence, integrity, and authority of system users, to ensure that system users are adequately supervised, and that access to the system is not arbitrarily or discriminatorily denied.

HONG KONG

The system sponsor should also have (or have ready access to) adequate appropriately qualified staff to maintain, upgrade and modify any necessary part of the system.

Principle 7. [Financial Integrity]

The relevant regulatory authorities and the system sponsor should consider any additional risk management exposures pertinent to the system, including those arising out from interaction with related financial systems.

HONG KONG

This analysis should also note the impacts that any failure in the host system would have on related entities.

Principle 8. [Surveillance]

Mechanisms should be in place to ensure that the information necessary to conduct adequate surveillance of the system for supervisory and enforcement purposes is available to the system sponsor and the relevant regulatory authorities on a timely basis.

Principle 9. [Relevant Disclosures]

The relevant regulatory authorities and/or the system sponsor should ensure that system users and system customers are adequately informed of the significant risks particular to trading through the system. The liability of the system sponsor, and/or the system providers to system users and system customers should be described, especially any agreements that seek to vary the allocation of losses that otherwise would result by operation of law.

Principle 10. [Allocation of Supervisory Responsibility]

Procedures should be developed to ensure that the system sponsor, system providers, and system users are aware of and will be responsive to the directives and concerns of relevant regulatory authorities.

OTHER ISSUES

Please use the space provided below to discuss any other issues or concerns that do not explicitly fit under the existing Principles.

FRANCE

It would be useful to add a Principle related to order routing systems.

GERMANY

- The IOSCO Principles mentioned above should also apply in case of cross-border co-operation of exchanges.
- Appropriate supervision of the home country authorities should be sufficient. Additional supervision by the host country authorities should be avoided. In effect, that implies that there should not be an additional admission of the exchange and its products by the host country authorities.

ITALY

The trading system should provide trading data to the clearing house on a real-time basis, so that the clearing house can monitor continuously its member's exposure and be able to promptly call for intra day margins when needed .