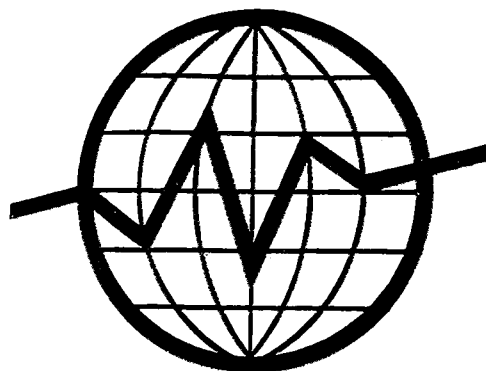


**REPORT ON ISSUES IN THE REGULATION OF
CROSS-BORDER PROPRIETARY SCREEN-BASED TRADING SYSTEMS**



INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS

October 1994

ISSUES IN THE REGULATION OF CROSS-BORDER PROPRIETARY SCREEN BASED TRADING SYSTEMS

INTRODUCTION

1. The objective of this Paper is to identify and explore the range of issues relevant to the regulation of Proprietary Trading Systems ("PTSs") which regulatory authorities should consider in determining their regulatory approach to PTSs and to discuss the regulatory issues relating to the cross-border operation of such systems. Attachment A summarises the regulatory issues identified in this Paper.
2. Technological advancement has produced two powerful, complementary phenomena: market automation and the globalisation of markets. Nowhere are these phenomena more apparent than in the development of cross-border screen based trading systems.
3. Cross-border screen based trading systems have the capacity to link directly market participants across jurisdictions without the necessity for intermediation via an exchange floor. They give rise to unique economic, financial, legal and regulatory issues. Securities regulators around the globe are beginning to come to terms with many of these issues.
4. The Technical Committee of IOSCO directed the former Working Party 7 to consider issues arising out of screen based trading systems for derivative products. Working Party 7 agreed to limit the scope of its inquiries to screen based trading systems that:
 - conclude or execute a legally-binding transaction;
 - are non-proprietary (ie. not operated by an individual intermediary); and
 - trade derivative products.
5. In June 1990, Working Party 7 produced 10 Suggested Principles for the Oversight of Screen Based Trading Systems for Derivative Products (Attachment B).
6. IOSCO Working Party 2 on the Regulation of Secondary Markets first met in Tokyo in June 1991. By way of contrast with Working Party 7, it discussed the issues which relate to screen based trading systems operated by non-self-regulatory organisations through which cross-border trading is conducted (hereafter "cross-border proprietary trading systems"). Cross-border proprietary trading systems may or may not conclude or execute legally binding transactions, depending on the type of system; by definition, these systems are proprietary; and are not owned and

operated by a regulated exchange and they may trade derivative or non-derivative products.

7. At a subsequent IOSCO Working Party meeting in Zurich, it was resolved as a first priority to discuss the regulation of trading aimed at preventing fraud, such as insider trading and market manipulation. The Working Party agreed that the following points needed to be considered:

- what laws and regulations are necessary to prevent fraudulent transactions through the system in accordance with each country's situation in relation to the transactions;
- should regulators request the system operator to submit to self-regulatory rules and the framework of market surveillance;
- should particular attention be paid to whether regulatory differences between exchanges and systems lead to competitive disadvantages or inadequate investor protection;
- should regulators request the system operator to provide regular or timely information in order for regulators to be aware of transactions undertaken in their own countries;
- should regulators exchange information and promote co-ordination among relevant regulators;
- what are the different responsibilities of regulators in different jurisdictions.

8. The Working Party met in Paris in January 1992 and considered an overview paper prepared by the Australian representatives. It was agreed that a survey of members' attitudes towards the regulation of PTSs be prepared and distributed to assist in further clarification of the issues. At the May 1992 meeting in Washington the discussion by the Working Party concentrated on some of the broader regulatory issues raised by the emergence of PTSs. The issues canvassed included the differing level of experience by members of the Working Party with the operation of such systems, how they would be regulated in the various jurisdictions and the implications of different philosophical approaches to regulation among some participants at the meeting. It was generally agreed that it would be difficult to reach agreement on the issue of a definitive regulatory approach and that it would be useful to explore more generally the regulatory issues to assist authorities determining their attitudes to PTSs.

of the consultative document forwarded by the Working Party to the Consultative Committee and a summary of responses is contained at Attachment C.

10. The Working Party is also aware of other work being undertaken by a range of groups on issues related to the Working Party's review of PTSs and that parties other than those represented on the IOSCO Consultative Committee, such as current and potential PTS developers and operators, will have views on the regulatory issues involved. In finalising this paper the Working Party has considered comments received on the Discussion Paper released for public comment by the Technical Committee. The discussion in this Paper is regarded by the Working Party as a contribution to the evolving debate on the regulatory issues for consideration by regulators and other participants in this area.

CROSS-BORDER PROPRIETARY TRADING SYSTEMS DEFINED

11. Screen based trading systems already take a number of different forms. Joseph Hardiman identifies the six primary types of electronic systems which exist today: (i) automated quotation systems (eg. NASDAQ); (ii) order driven systems (eg. Toronto Stock Exchange's CATS system); (iii) order "negotiating" systems, such as Reuters Instinet; (iv) small order automatic execution systems; (v) crossing systems; and (vi) single price auctions.¹
12. The elements of all such systems are: a communication system to disseminate buy and sell quotes or bids (display of market information); a system to communicate instructions for trading securities (hereafter referred to as "orders") among participants (order routing); a trading mechanism to transform such instructions into trades (trade execution)²; and reporting of such transactions to regulatory authorities and market participants (trade reporting). It is important to identify how these elements interact in the design of a system to determine the regulatory issues involved. There are at least three possible configurations:
- the system operates as an electronic bulletin board that disseminates trading information from other markets or dealers to subscribers to the system who conduct transactions independently of the system on another market or by direct negotiation with a counterparty ("electronic bulletin board");
 - the system operates as an order routing system and merely channels orders to buy and sell securities to a market or dealer ("electronic order routing system");

1 Joseph Hardiman (1991) "Automation and Electronic Trading: Key Issues for Regulating in a New Era," 1991 IOSCO Annual Meeting.

2 In some cases the trading mechanism may be separate from the communication mechanism - eg. electronic bulletin boards.

The first step in the design of a control system is the selection of the desired performance characteristics. This involves the determination of the system's response to various inputs, such as step, ramp, and sinusoidal signals.

The next step is the selection of a control strategy. This involves the determination of the system's transfer function and the selection of a controller that will provide the desired performance. The controller is typically designed using the root locus method, the frequency response method, or the state space method.

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October 17, 1994

IOSCO Technical Committee Report on Issues in the Regulation of
Cross-Border Proprietary Screen Based Trading Systems

The objective of the Report is to identify and explore the range of issues relevant to the regulation of Proprietary Trading Systems ("PTSS") which regulatory authorities should consider in determining their regulatory approach to PTSS and on the regulatory issues relating to the cross-border operation of such systems.

The Technical Committee is aware of other work being undertaken by a range of groups on issues related to the Technical Committee's review of PTSS and that parties such as current and potential PTS developers and operators will have views on the regulatory issues involved in the Report. The Report is regarded by the Technical Committee as a contribution to the evolving debate on the regulatory issues for consideration by regulators and other participants in this area.

Comments on the Report by any groups or entities concerned are welcomed by the end of April, 1995. They should be sent to the following address;

Mr. Tadashi Uemura
Chairman of the Working Party on Regulation of Secondary Markets

c/o Securities Bureau,
Ministry of Finance of Japan,
3-1-1, Kasumigaseki, Chiyoda-ku,
Tokyo 100, Japan

Tel +81-3-3581-3505, Fax +81-3-5251-2156

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- the system involves both the communication of orders to buy and sell securities and the transformation of those orders into trades ("execution system").
13. Cross-border proprietary trading systems may take any one or more of these forms. The focus of this Paper and the analysis by the Working Party are on screen trading systems that are not operated by an exchange or self-regulatory organisation and regulated as such.
 14. Cross-border transactions in securities are not a new phenomenon and have been carried out via telephone or other electronic link to intermediaries which place an order into a trading system located in the foreign jurisdiction. The essential differences resulting from recent advances in technology are the ability to 'place' orders directly into a trading system on a real time basis from many different locations simultaneously and that systems may operate from more than one jurisdiction possibly without the need for intervention of the intermediaries. These new facilities offer potential cost savings and efficiencies in the trading process. From a regulatory point of view, a major potential advantage is the complete audit trail such facilities are capable of generating. However, the ability to access the trading system directly, simultaneously and on a real time basis in a range of jurisdictions gives rise to a range of cross-border jurisdictional and other regulatory issues.
 15. Many of these issues are common to both PTS and exchange operated cross-border screen trading systems.

REGULATORY OBJECTIVES

16. It is critical to focus from the outset on the appropriate objectives of a regulatory scheme for cross-border proprietary trading systems. Broadly the primary objective of the regulation of organised systems for trading securities is to ensure that the integrity of the trading system is maintained through fair and equitable trading rules that strike an appropriate balance between the demands of different market participants. Such regulation also involves market surveillance and other quality assurance activities. In the case of electronic markets, the issue of market integrity extends to a concern with system design, capacity and reliability. Market participants are primarily regulated to prevent fraud, to eliminate the opportunity to engage in unfair, manipulative or deceptive conduct and to ensure that these intermediaries are appropriately capitalised. The Zurich meeting emphasised that the regulatory regime should be aimed at preventing fraud.

- fair, orderly, competitive, efficient and informed markets;
 - the prevention of fraud, dishonesty and manipulative behaviour in relation to systems designed to facilitate the buying, selling or exchange of securities;
 - the prudential soundness of markets and their participants; and
 - the appropriate monitoring, surveillance and enforcement of national securities laws in relation to organised transactions in securities.
18. The regulatory framework should also not unnecessarily stifle innovation in the development of new systems and trading technologies.

THE REGULATORY APPROACH

19. Two basic regulatory attitudes towards PTSs were identified in a survey of members of the Working Party: those jurisdictions that would generally characterise a PTS as a broker-dealer: and those that would generally characterise a PTS as an exchange or stock market. The US³, Ontario and Quebec would generally characterise a PTS as a broker-dealer while Australia, Japan, Germany, and the Netherlands would generally characterise a PTS as an exchange or stock market. In Switzerland⁴, Spain, Italy, Mexico, UK and France, a PTS could be regulated as a broker-dealer or exchange. It should, however, be noted that many jurisdictions have limited experience of PTSs and the regulatory treatment in some of these jurisdictions should be regarded as not finally settled. It is also important to note that some Working Party members are in the process of reviewing their regulation and attitude to PTSs. This has led some members to suggest that a third approach based on a more pragmatic view towards the regulatory treatment of PTSs depending on the nature of the PTS and regulatory issues involved should be considered.
20. Regulation as an exchange is designed to ensure that the provider of the trading facility undertakes certain regulatory activities. Usually the additional obligations involve a self-regulatory role in dealing with important matters such as the listing of securities in the secondary markets; market surveillance; market information; trading regulations; settlement and clearance of transactions; admission of participants (broker-dealers); capital requirements of participants;

3 In relation to futures and commodity options there are no screen-based trade execution systems operated by non self-regulatory organisations. Section 4(a) of the U.S. Commodity Exchange Act requires all futures and commodity options transactions in the U.S. to take place on an exchange designated as a contract market by the Commodity Futures Trading Commission ("CFTC"). The Futures Trading Practices Act of 1992 grants the CFTC general exemptive authority under the Act with respect to the exchange-trading requirement. Accordingly, the legal status of PTSs under the Act is an open question.

4 Once a proposed new federal law is in force.

codes of business or ethical conduct; dispute resolution and enforcement; and fidelity fund arrangements.⁵

21. In contrast the regulation of broker-dealers is more narrowly focussed and is primarily designed to ensure that the interests of their clients are adequately protected, although regulators are increasingly concerned with the potential systemic effects of the failure of a major intermediary. This approach would not normally extend to the organisational aspects of the trading facility itself.
22. In the United States there are currently operational a number of proprietary trading systems that trade securities. The SEC's approach has been to determine whether it is appropriate to treat a PTS as a non-exchange or an exchange system. The non-exchange systems have been regarded as broker-dealers and banks (at least where trade execution is involved) and SEC staff issue a no-action letter with respect to the registration of those systems as exchanges where it is considered appropriate to do so.
23. As a condition of the no-action letters, the SEC staff have required the system sponsor to provide: quarterly reports of trading activity in the system; the number and identity of the system participants and of prospective participants who have been denied access to the system; and at least 30 days advance notice of material changes to the system. The system sponsor is also required to reassure the regulator that there is adequate system security and additional capacity to cope with any expected increase in the volume of transactions. Finally, the SEC staff has added additional reporting requirements tailored to the specific characteristics of the system. The SEC's approach has developed incrementally on a case by case approach.
24. In one instance the SEC has recognised the affiliation between a non-exchange system sponsored by a registered broker-dealer (RMJ Options, Inc.) and an entity that operates as a registered clearing agency (Delta Government Options Corp). Thus, the Delta system, which permits participants to trade options on government securities, operates subject to the regulatory protection applicable to registered clearing agencies as well as registered broker-dealers.

⁵ On one analysis all the various functions exist to enhance the quality of the central market. This view is expressed in the Staff Submission to the Ontario Securities Commission ("OSC") Review of the Toronto Stock Exchange Rules and Instinet Canada Limited. The OSC staff submission states at page 37: "... the paramount function of a central auction market is to consolidate the order flow of its members in one book in order to facilitate liquidity and price discovery. All of the other functions which exchanges have undertaken over time (eg, systems to facilitate trading, execution and settlement; rules and conventions to ensure fair and honest behaviour by members; listing

25. In addition, the SEC has recognised one PTS, AZX Inc., which operates as an exchange through a single-price auction format that aggregates supply and demand at a single point in time. The SEC granted AZX an exemption from exchange registration based on the limited volume of securities transactions contemplated to be executed through the system. That exemption was conditional upon requirements that the system, among other things: (i) restrict traded securities to registered securities and government securities; (ii) adopt surveillance procedures to detect insider trading, manipulative abuses, and confidentiality violations; and (iii) disseminate transaction information to the SEC, to a vendor and to self-regulatory organisations. Finally, the SEC stated that should volume in the system rise to levels equivalent to the Cincinnati Stock Exchange, the SEC would commence a review to determine whether to rescind the exemption.
26. In 1989 the SEC requested comment on proposed Rule 15c2-10 that sought to impose a regulatory structure between that of an exchange and that of a broker-dealer. Under the Rule, a trading system would have been required to file with the Commission a plan describing its operation, make records available to the Commission on a regular basis and permit the Commission to examine and supervise the system to ensure compliance with the terms of the submitted plan and with federal securities laws.
27. The SEC's staff has examined the role PTSs play in the market, and the appropriate means of overseeing such systems, including proposed Rule 15c2-10, in the recently released report Market 2000: an Examination of Current Equity Market Developments. In Market 2000, SEC staff concluded that its experience in overseeing these systems did not lead it to believe that the regulatory structure contained in proposed Rule 15c2-10 was appropriate for PTSs at this time. The staff concluded that regulatory treatment as broker-dealers continues to be appropriate given the nature of PTS activities, but that additional information should be provided to the SEC to monitor their activities. Accordingly, the staff recommended that the SEC adopt a record keeping and reporting rule to provide the SEC with better oversight of the aspects of automated trading systems without unduly burdening the systems. The SEC has recently proposed such a record keeping and reporting rule⁶, and has withdrawn proposed Rule 15c2-10.⁷

6 Securities Exchange Act Release No 33605 (February 9, 1994) (proposing Rule 17a-23 under the Securities Exchange Act of 1934 to establish record keeping and reporting requirements for brokers and dealers that operate automated trading systems (called "broker-dealer trading systems", or "BDTSs"). Registered broker-dealer sponsors of these systems would be required to maintain participant, volume and transaction records, and to report system activity periodically to the Commission. As proposed, the Rule would cover both PTSs and some automated trading systems operated by third market makers.

7 Securities Exchange Act Release No 33621 (February 14, 1994).

28. In the UK a person carrying on investment business by making, or offering or agreeing to make arrangements with a view to a person who participates in the arrangements buying, selling, subscribing for or underwriting investments (paragraph 13(b) of Schedule One to the Financial Services Act 1986), may seek to become authorised as a service company by the Securities and Investments Board ("SIB"). Alternatively, authorisation as a broker-dealer may be sought by virtue of membership of a self-regulatory organisation such as the Securities and Futures Authority. An organisation may also apply to SIB for recognition as an investment exchange ("RIE"). SIB will grant such an application if it is content that the organisation is capable of meeting the obligations imposed on RIEs by the Financial Services Act 1986, in which case it becomes an exempted person with respect to anything done in its capacity as such which constitutes investment business. In certain circumstances the obligation to apply for authorisation may not apply if the arrangements are made by a person without a permanent place of business in the UK.⁸
29. Service company authorisation is restricted to persons who carry on paragraph 13(b) activities and where the participants are business or experienced investors. Service companies are not permitted to guarantee or ensure performance of transactions undertaken on their facilities.
30. A number of inter-connected factors are likely to influence the approach to regulation of PTSs in any particular jurisdiction including the history and structure of the legislative regime, attitudes towards the role of a central market place and fragmentation, the market microstructure (quote versus order driven markets), and approach to issues such as transparency. Many of these issues are the subject of other work by IOSCO and will only be mentioned in this context to the extent that they have a bearing on issues related to PTSs.
31. It would appear that an important factor in characterisation of a PTS as an exchange or broker-dealer is whether the primary tool for enhancing market quality is a central market place in which order flow is centralised or a market structure which relies on the obligations of intermediaries to procure best execution for their clients. This factor is not sufficient by itself to explain the regulatory characterisation of PTSs as either an exchange or broker-dealer in all jurisdictions.
32. It is because of these different emphases that it was not considered useful to pursue further an approach to the regulation of PTSs in terms of their institutional characterisation as either a broker-dealer or as an exchange.
33. Rather, it was agreed that a more fruitful approach would be to develop a non-

34. A number of approaches were examined. One approach was to seek to "unbundle" the provision of regulatory, trading, information and other services that have traditionally been combined in a traditional securities exchange. For example, the SIB's discussion document notes that the services provided by a securities exchange typically included all or most of the following services:

- publication of bid/offer quotations (quote-driven system);
- publication of public limit orders (order-driven system);
- publication of post-trade transaction details;
- publication of information concerning an issuer (company news);
- provision of a medium for dealing (eg floor, electronic dealing systems);
- provision of trade reporting facilities;
- provision of trade confirmation and matching facilities;
- provision of clearing and settlement facilities;
- infrastructure for surveillance and enforcement of market rules.⁹

35. As noted above, the underlying premise of those jurisdictions that treat PTSs as exchanges is that the provider of a trading facility should also be obliged to undertake certain regulatory functions or services¹⁰. By seeking to separately identify the different types of regulatory services provided and "unbundle" these from the provision of the actual trading facility the analysis has the potential to identify:

- whether other parties could be contracted to perform some of the services usually undertaken by the self-regulatory organisation;
- which regulatory services are required for all or any categories of PTSs; and
- the comparability of regulatory requirements between different types of trading systems and also different jurisdictions.¹¹

9 SIB (1994), p 28.

10 Lee R (1992) "What is an Exchange" Discussion Paper, Capital Markets Forum, p 33.

11 As the traditional exchanges face increasing competition from other exchanges and alternative trading systems some are re-examining their core functions, whether they need to carry out all the functions traditionally engaged in, and more explicitly the costs of the regulatory services provided.

36. The attempt to "unbundle" the provision of regulatory services from the provision of a trading facility opens up a range of possible trading system-regulatory configurations. Some of the variations include:
- a system proprietor who provides the trading facility but does not supply any regulatory services;
 - a system proprietor who contracts one or more independent parties to provide the facility infrastructure and/or various regulatory services;
 - the provision of the trading facility to a single market with a variety of issuers and tradeables;
 - individual issuers utilising the trading facility to run markets in their own tradeables.
37. No doubt there are many other possibilities.¹² Concern was expressed by some members of the Working Party that if the "unbundling" approach was adopted as a regulatory approach rather than as merely an analytical tool then some of the important synergies, such as the availability of expert staff, arising from the joint regulation of the trading system and its operator, whether a traditional member based exchange or some other private organisation, would be lost with adverse consequences for the level of investor protection. There were also reservations that regulatory functions may not be properly performed if third party service providers have substantial financial interests in the system and that the "contracting out" of regulatory functions could result in significant co-ordination problems.
38. A related approach is to base regulation on an examination of the various functions performed by any particular system and impose regulation relevant to the actual functions performed. This recognises that a PTS may perform one or more of the functions associated with a traditional exchange and that it is necessary to tailor the regulation accordingly. This involves imposition of the relevant regulatory requirements on the system proprietor. This approach is consistent with the unbundling concept in that it recognises that for each function it is necessary to examine which regulatory service is appropriate and how it is best delivered to ensure an adequate level of investor protection.

12 For example, in the UK there is a separation of the self-regulatory organisation ("SRO") from the Exchange. The SRO (and SIB in the case of service companies) is responsible for fitness and properness, prudential supervision and the conduct of the firm/client relationship. The Exchanges are responsible for maintaining an orderly market by regulating inter-professional conduct (eg

39. In this approach the first step is to identify the key functions and the regulatory objectives for each element at a general level before more detailed regulatory standards can be determined. These functions can be related directly to the nature of the activity undertaken on the system. One suggestion is that it is relatively easy to distinguish the core "market" functions of organising liquidity through the interaction of the orders of a group of market participants as compared to the dealer function where the intermediary provides liquidity through the commitment of its own capital.¹³ This analytical approach was supported in comments received from one member of the IOSCO Consultative Committee. This approach, however, has the potential to re-introduce the difficulties in determining whether any function is properly characterised as a dealer or market under the securities laws of any particular jurisdiction. Also, there are difficulties applying this approach to some systems as the boundaries between once separate activities become blurred.
40. It has also been suggested that the core functions relating to the display of market information, order routing and trade execution can be assessed against the key regulatory issues identified by IOSCO Working Party 7 in its work on screen based trading for derivative products and that the Principles identified by Working Party 7 are applicable to all screen trading systems.
41. It is agreed that the content of regulation will need to take into account the nature of the system (ie information communication, order routing or execution), as well as other features such as the types of securities traded and categories of system participants or clients involved in the securities transactions. The greater the level of participation by unsophisticated investors the more attention regulators will need to pay to ensure that adequate investor protection mechanisms are in place. However, even where the system participants are professional investors regulators should seek to ensure that those systems are not operated in a manner that may be detrimental to the securities markets and investors. It is also agreed that the Principles articulated by IOSCO Working Party 7 are applicable to all forms of screen trading including that conducted by a PTS.
42. The approach adopted in this Paper is to identify some key elements, including the core functions identified above, and seek to agree on regulatory issues for each of those functions as the basis for more detailed examination of regulatory standards. This approach is adopted because of the large number of system permutations that are possible and the difficulty of setting specific standards for each possible configuration. This functional approach will also assist in the discussion of an appropriate allocation of regulatory responsibility for the purposes of regulating the cross-border operation of PTSs.
43. In general, it is considered that the PTS should be regulated to promote fair competition between different trading systems and to ensure that the securities markets as a whole facilitate price discovery, the best execution of customer

13 Ketchum, R (1993) "Electronic Trading Systems in a Global Environment - Local and Global Issues", Paper at 1993 IOSCO Annual Meeting, Workshop on Screen Based Trading Systems and Quasi - Exchanges. Mexico City, Mexico, October 26.

orders, maintenance of fair and orderly markets, and control systemic risk.

44. The regulatory issues relating to the interaction of a PTS with the organised markets will depend on the nature of the activity on a PTS (display of market information, order routing and trade execution) and the manner in which these functions are directly or indirectly linked to an organised regulated securities market ("the regulated market"). If orders are transmitted to the regulated market, the specific regulatory issues in relation to order routing on a PTS should be addressed to ensure fairness, efficiency and integrity of the market as a whole.
45. The key functions for the purposes of discussing issues of regulatory concern in relation to a PTS were identified by the Working Party as follows:
- Approval of the PTS Sponsor
 - Admission of Securities to the PTS
 - Admission of Participants to the PTS
 - Provision of Information on Indications of Interest, Quotations, or Orders to Purchase, Sell or Exchange Securities
 - Routing of Orders to a Trade Execution System
 - Trade Execution
 - Post Trade Reporting and Publication
 - Clearing and Settlement
 - Supervision of the System and Participants by the PTS Sponsor
 - Supervision of the System and Participants by the Regulator.
46. The objective of the discussion is to identify and explore the range of issues relevant to the regulation of PTSs which regulatory authorities should consider in determining their regulatory approach to PTSs. The Working Party recognises that the introduction of PTSs is a new and evolving issue and that many jurisdictions have so far limited or no experience of PTSs. The following non-exclusive points of consideration are proposed only to give guidance to regulators to find the appropriate regulatory response in their jurisdiction to PTSs and on regulatory

system to perform one or more of these functions. In relation to each regulatory objective domestic regulatory standards should be consistent with any relevant international standards or principles.¹⁴

48. The primary focus of the Working Party's discussion of regulatory issues relates to PTSs that automate the execution of orders to buy or sell, or that automate the dissemination or collection of quotations, orders to buy and sell securities, or indications of interest, and also provide a mechanism for matching or crossing orders in the system, or for otherwise facilitating agreement between participants on the basic terms of a purchase or sale of a security.¹⁵ This definition excludes systems that merely provide historical information about transactions (information providers) and those systems that automate the collection and transmission of orders by regulated intermediaries to a regulated market and do not provide any facilities for automatic matching, crossing or execution of those orders (internal order routing systems). Such systems may raise other regulatory issues. However, these are outside the scope of the Working Party's deliberations at this stage.

APPROVAL OF A PTS SPONSOR

49. The term "PTS sponsor" means any person or organisation who organises, operates, administers or otherwise directly or indirectly controls a trading system. Jurisdictions have different mechanisms to ensure that those acting as intermediaries, operators of securities markets and other trading systems are of good character and have the operating, financial capacity and technical skills to carry out their required functions. These requirements are often referred to in a shorthand manner as a "fit and proper" test. In many jurisdictions, in order to prevent the creation of arrangements designed to avoid the relevant regulatory requirements, these tests also apply to controlling or major shareholders or other parties that may have the ability to materially influence or control the activity of the PTS sponsor ("indirectly control").

14 For example, any regulatory principle on clearing and settlement for a PTS would need to take into account IOSCO endorsement of the Group of Thirty Report. Likewise the regulatory objective relating to technical system standards would need to take into account any IOSCO guidelines in this area when developed. The Principles on Screen Based Trading from IOSCO WP No 7 are relevant to all screen based trading including PTSs.

15 The SEC in proposed Rule 17a-23 would exclude from the Rule systems that display indications of interest or orders and where the system users utilises this information to contact the relevant participant directly and execute a transaction without intercession by the system or the system sponsor. Such an arrangement does not allow participants to agree to the terms of a transaction "through use of the system" as required in the proposed SEC Rule. In contrast, in Australia systems that operate in this way would probably fall within the definition of a stock market under the Corporations Law, especially where the information on the system was directly linked to the inducing of offers or invitations to sell, purchase or exchange securities and the execution of transactions.

50. There was general agreement that the operator of the PTS should meet the relevant fit and proper tests for the particular function of the PTS that would be applicable in that jurisdiction. The regulator would require sufficient details about the sponsor and proposed system to make this assessment as part of the licensing, approval or recognition process.
51. In some PTSs the PTS sponsor may assume some principal, settlement, guarantee or performance risk with respect to transactions effected by system participants through use of the system. In circumstances where such risk is assumed by the PTS sponsor, the regulator may need to assess that appropriate prudential or other measures designed to reduce the risks of non-completion of a transaction. What requirements are appropriate will depend on the nature of the PTSs and its participants. For example, a system that involves a small number of professional participants could be subject to different requirements than that applicable to a large volume PTS that directly or indirectly included retail participants.
52. *The Working Party agreed that the following regulatory issues arise for consideration ("Regulatory Issues for Consideration"):*

The term "PTS sponsor" means any person or organisation who organises, operates, administers or otherwise directly or indirectly controls a PTS. The PTS sponsor should be a fit and a proper person in accordance with national regulatory requirements applicable to that category of activity, financially sound, competent to operate the system in compliance with national laws, and clearly accountable to the regulator.

Where the PTS sponsor assumes any principal, settlement, guarantee or performance risk, it is important to ensure compliance with prudential or other regulatory requirements applicable in that jurisdiction designed to reduce the risk of non-completion of a transaction in circumstances of a failure to perform by one or more parties. These requirements will differ according to the specific characteristics of the PTS system, system sponsor and system participants.

ADMISSION OF SECURITIES TO A PTS

53. The regulator should be informed of the securities or types of securities to be traded on a PTS to enable it to adequately oversee the maintenance of fair, honest, efficient and informed securities markets. In most cases the regulator would only need be informed of the types or categories of the securities and not of every individual security to be traded on the PTS. This is to provide the regulator with

Accordingly, it was proposed by these members that it would be necessary for the regulator to have the ability to refuse admission of a security to a PTS system where this was required to meet regulatory objectives. The types of regulatory concerns identified that may lead to a requirement for some form of approval mechanism included:

- the need to ensure that adequate financial and non-financial information is available in relation to securities traded on a PTS;
 - the need to ensure adequate levels of liquidity for securities, especially those available for retail investors;
 - approval of offer documents in the context of public primary offers of securities; and
 - where the same or similar securities are already listed on a regulated market.
55. The way in which different regulatory jurisdictions deal with the provision of information in relation to listed and unlisted securities and the other issues noted above varies. For example, in some cases both primary offer and secondary trading disclosure is regulated by the market provider. In other cases this may be a matter for the general securities or company law.

56. ***Regulatory Issues for Consideration:***

The regulator should, as a minimum requirement, be informed of the securities or types of securities to be traded on a PTS to enable it to adequately oversee the maintenance of fair, honest, efficient and informed securities markets.

In addition, some Working Party members consider that in order to ensure consistency with national securities laws, including the regulation governing the information to be provided by an issuer when its shares are offered to, or held by the public, regulators should have the ability to oppose the trading of securities on a PTS when they consider it necessary for investor protection.

ADMISSION OF PARTICIPANTS TO A PTS

57. PTSs may cater for a range of different categories of participants including: regulated intermediaries acting as either principal or agent; direct institutional or professional investors; or a combination of retail and professional investors.
58. A PTS as a commercial operation may wish only to make its services available to particular types of participants or specific market segments that it has identified as providing a viable commercial opportunity. In these circumstances it is considered that admission of participants to the PTS system should be based on objective criteria applied fairly and on a non-discriminatory basis. The regulator

and participants should be informed of the criteria to be applied.

59. Where the participants are regulated intermediaries acting as either a principal or agent they would normally be subject to the relevant approval or registration process, legislative requirements, codes of business conduct or rules and procedures of the relevant self-regulatory organisation. As regulated intermediaries they would be subject to the relevant fit and proper person test applicable in the jurisdiction for that type of intermediary. It is considered that where participants act as intermediaries for retail customers a "fit and proper" test should always apply.
60. Regulated intermediaries would be subject to any applicable prudential regulation. Regulators will need to assess whether existing prudential controls and monitoring of these requirements sufficiently takes into account any specific risk exposure of PTS participants arising from transactions on the PTS system.
61. Whether a non-intermediary participant, such as an institutional investor, is subject to prudential or other controls is currently a matter for each jurisdiction's regulatory regime. The more difficult issue of the potential for a PTS system to offer direct participation by retail customers was noted by the Working Party, but was considered to be a rare occurrence at this stage in the development of PTSs.
62. *Regulatory Issues for Consideration:*

Access to the system should apply in a fair and non-discriminatory manner. The regulator and participants should be informed by a PTS of the criteria and procedures that will govern the grant or denial of access to a PTS of each specific category of participant.

In order to ensure financial soundness and integrity of PTSs there should be compliance by participants that are regulated intermediaries with the prudential controls established by the regulator, relevant SRO or PTS sponsor. Participants should comply with the system's rules, any applicable code of business conduct, and national securities laws.

64. A PTS that offers some facility for the matching, crossing or execution of transactions will display information on its system in relation to indications of interest, details of quotes, or buy and sell orders. As noted above, PTSs may provide access to specific categories of participants defined according to some objectively established criteria ("similarly situated participants"). Participants seek access to the PTS and in doing so may be deemed to have accepted the types and manner in which the PTS provides its services on a commercial basis. At a minimum, the system should provide pre-trade transaction information on the same basis to all similarly situated participants. This is designed to ensure an equitable distribution of information to similarly situated participants in the PTS system.
65. Some Working Party members considered that the provision of information on a differential basis to specific categories of participants in a PTS may create an in-equitable distribution of information and unfair trading advantages for particular categories of system participants. These Working Party members considered that, in principle, information should be provided to all PTS participants on the same basis and that any departure from this principle should only occur where there was a reasonable basis for the provision of differential information to categories of participants. This would involve the regulator making some assessment of whether the categorisation of participants and the type of information provided to each category was reasonable and did not result in any unfair trading or other advantages to any one category of PTS participant.
66. *Regulatory Issues for Consideration:*

To enhance investor protection, market liquidity, price discovery and efforts of intermediaries to provide best execution the PTS should provide, at a minimum, information in relation to indications of interest, quotations, or orders to purchase, sell or exchange securities on the same basis to all similarly situated market participants. There should be a reasonable basis of any categorisation of participants for the purposes of access to pre-trade transaction information. Any differential access to such information should not unfairly disadvantage specific categories of participant, especially where such participants are unable to adequately assess for themselves the commercial risks involved in participation in the PTS.

ORDER ROUTING

67. The specific regulatory issues in relation to order routing on a PTS may depend on whether orders are transmitted to an organised regulated market or to other alternative trade execution and matching systems.
68. The focus of the Working Party's deliberations is on PTSs which provide for the matching, crossing or execution of transactions. This definition excludes systems that merely automate the collection and transmission of orders by regulated intermediaries to a regulated market and that do not provide any facilities for

automatic matching, crossing or execution of those orders (internal order routing systems). These systems in many ways make more efficient the current activities of members of the regulated exchanges and raise less significant issues since such systems will be the subject to the current rules and oversight of the regulated market or self-regulatory organisation. The relevant exchange or SRO, however, may need to ensure that the implementation of automated order routing does not lead to procedural mismatching that may undermine the orderly conduct of the regulated market. The definition of PTS also excludes exchange trading and other systems.

69. PTSs that do provide for matching, crossing or execution of transactions linked to a regulated market or to other alternative trade matching and execution systems raise additional regulatory issues. A key concern is that PTSs will lead to market fragmentation with adverse consequences for the depth and liquidity, and therefore, price discovery, transaction costs and efficiency of trading. Fragmentation can be defined as the dispersion of order flow and can occur between market centres for inter-listed securities, in the procedures of the market (ie. crossing rules), among dealers in a dealer market or between different trading systems.
70. The development of PTSs has the possibility to further disperse buying and selling orders between competing trading centres and reduce the opportunities for order interaction in a central auction process. The hearings into the Rules of the Toronto Stock Exchange and Instinet Canada Limited by the Ontario Securities Commission indicated that these concerns arise even where the PTS is linked to a regulated market and not only where orders are routed to alternative matching or execution systems.
71. There may be both benefits and costs in fragmented versus central markets. In part this is due to the two types of competition in the securities markets: (i) between buyers and sellers of a security; and (ii) among providers of dealer or trading services. Accordingly, competition between trading centres or systems appears more conducive to innovation in services, reduction in commissions and greater flexibility for investors. In some cases it is argued that fragmentation has directly increased the liquidity in some markets due to spillover effects¹⁶. Such competition may, however, raise issues about the ability to adhere to time and price priority trading rules, as well as to claims of "free riding" of alternative trading systems on the price discovery and regulatory functions performed by the primary regulated markets.¹⁷

16 SIB in its recent discussion Paper on UK equity markets notes that the creation of the American Depositary Receipt market has arguably increased American investor interest in the UK equity market.

72. These matters raise difficult issues about the advantages of the two types of competition and how the benefits of competition between market centres and systems can be achieved without undermining the important price discovery and regulatory functions of the primary regulated markets. Various jurisdictions approach the achievement of this difficult balance in different ways. At a minimum, it is important that regulators and participants have sufficient information to be able to assess the implications of PTSs' order routing procedures. In addition where the PTSs' order routing procedures are linked to a regulated market they should be assessed to ensure that they are consistent with the integrity of the market as a whole and do not result in a disturbance to the orderly conduct of the regulated market.

73. *Regulatory Issues for Consideration:*

Order routing procedures should be clearly disclosed to participants and the regulator, applied fairly to all similarly situated participants, and not involve any breaches of relevant national laws relating, among others, to client precedence, front running or other abusive market conduct.

The specific regulatory issues in relation to order routing on a PTS may depend on whether orders are transmitted to an organised regulated market or to other alternative trade execution and matching systems. If orders are transmitted to an organised market, the specific regulatory issues in relation to order routing on a PTS should be addressed to ensure fairness, efficiency and integrity of the market as a whole. The relevant regulated market's order routing, displacement, crossing and other rules should be taken into account in order to avoid any disturbance to the conduct of an orderly market that may be caused by procedural mismatching between the PTS and regulated markets.

EXECUTION OF TRANSACTIONS

74. The order execution algorithm is the set of rules that determines the processing and matching of orders entered into the system. A wide variety of order execution algorithms are possible. The order execution algorithm can be a simple time and price system or have more complex features to deal with specific types of transactions, such as block or crossed trades. It can also be designed to enforce speculative position limits, credit limits, price limits, circuit breakers or other market control features. The more complex the system the more importance needs to be attached to appropriate design to prevent market abuses.¹⁸ Automated systems have certain advantages in that the execution algorithm can be specified to ensure compliance with regulatory requirements and the system can generate an automatic audit trail to enable the detection of any abuses. The order execution algorithm

18 See the discussion in Corcoran A and Lawton J (1993) "Regulatory Oversight and Automated Trading Design: Elements of Consideration", Journal of Futures Markets, Vol 13, No 2, pp 218-219.

should be disclosed to the regulator and system participants prior to the operation of the system and be fairly applied to similar types of system participants.

75. Some members were of the view that the same order algorithm that applies in a regulated market should apply to that of the PTS. The consistency of execution algorithms between the regulated market and PTS will be more of an issue where the two markets are closely inter-linked. Working Party members agreed that there will be a need to ensure that any mismatching in execution procedures does not cause a problem for the orderly conduct of the regulated market.

76. *Regulatory Issues for Consideration:*

The order execution algorithm is the set of rules that determines the processing and matching of orders entered into the system. A wide variety of order execution algorithms are possible. The order execution algorithm should be disclosed to the regulator and system participants prior to the operation of the system and be fairly applied to similarly situated system participants.

Where the exchange and PTS are linked in some way, the execution algorithm of the PTS should be assessed to avoid any procedural mismatching between the PTS and regulated market that may effect the orderly conduct of the regulated market.

POST TRADE REPORTING AND PUBLICATION

77. The issue of transparency, post trade reporting and publication of transaction information and the implications for market efficiency, integrity and fairness has been the subject of other work by the Working Party. The Working Party is still considering issues related to the establishment of international agreed minimum standards of transparency. The IOSCO Discussion Paper on transparency provides an analysis of the arguments relating to inter-exchange competition and the ability of some markets to free-ride off other markets with general detrimental effects.¹⁹ In that IOSCO Discussion Paper one issue relates to the ability of a less transparent market being able to gain the benefits of the price discovery process without sharing in the costs of that transparency. This, it is sometimes argued, provides an unfair competitive advantage to the former market and is potentially harmful to the overall price discovery process.

¹⁹ This is also an issue raised by the SIB in its Discussion Paper on UK Markets

78. This issue arises in the context of the relationship between the primary regulated markets and PTSs in that many of these systems may passively price on the basis of the price discovery process in the primary market. This is an example of potential free-riding by the PTSs on the costs borne by the regulated markets. It raises the general issue of whether there should be common minimum transparency requirements applicable to both the primary regulated markets and PTSs.
79. Working Party members considered that, as a minimum, there should be equitable distribution of information to participants in the same category and that any such categorisation of PTS participants should be objective and based on reasonable grounds. Regulators should be able to specify participants access to information in accordance with their regulatory requirements. The nature of any agreed minimum international standards for post trade publication is the subject of other work in the context of the debate about transparency generally. Working Party members are inclined to the view that where the same or related securities are traded the same post trade publication standards should apply to both the regulated markets and PTSs. It was agreed by all Working Party members that post trade information should be made available to the market where the regulator considers that it is necessary for the operation of a fair market generally.
80. *Regulatory Issues for Consideration:*

In order to enhance investor protection, address market fragmentation issues and enhance regulatory monitoring, information on completed transactions on a PTS should be provided on the same basis to all similarly situated PTS participants and reported in accordance with national requirements to the regulator. Where the information is considered by the regulator to be necessary for the protection of investors or the availability of a fair market, it should be made available to the market as a whole.

CLEARING AND SETTLEMENT

81. Only some PTSs will provide clearing or settlement services. In many cases these services will be provided by other organisations subject to the relevant regulation in that jurisdiction. In some jurisdictions providers of clearing arrangements are subject to specific regulatory requirements and in others these functions are regulated by company rather than securities law. In these circumstances the regulator may need to assess that the PTS and participants will be able to comply with all relevant regulatory requirements as part of any approval process. Where the PTS provides some form of clearing and regulatory services itself, the regulator will need to assess whether these services conform to national regulatory requirements and are designed to minimise risks in the settlement system.

82. Regulatory Issues for Consideration:

The regulator should be satisfied that adequate arrangements exist to facilitate the orderly clearing and settlement of transactions effected on a PTS.

Where the PTS provides for clearing and settlement, those services should be regulated according to national regulatory requirements and be designed to minimise risks in the settlement system.

SUPERVISION OF THE SYSTEM AND PARTICIPANTS BY THE PTS SPONSOR

83. Different jurisdictions allocate regulatory responsibilities for supervision of trading systems in different ways. In some jurisdictions the provider of the trading facility also has responsibilities for the regulation of the conduct of the market and of market participants. In other jurisdictions the responsibility for regulation of participants rests with the statutory regulator or an SRO separate from the entity that provides the market place or trading facilities. In some jurisdictions the regulatory roles will be performed by a combination of these entities. The issue in relation to PTSs is the extent to which the PTS sponsor should assume some or all of the regulatory responsibilities for the conduct of the PTS and its participants.

84. The provision of regulatory activities has some of the characteristics of a public good whose benefits are generally available to all investors. It is recognised that there is a case that the allocation of regulatory cost should be equitably borne by all those who gain a benefit from the regulatory services provided. The possible regulatory controls identified in this Paper are discussed because they may be appropriate in their own right, rather than to redress perceived competitive disadvantage.

85. The regulator should be assured that the supervisory services can be provided efficiently and effectively and that the "contracting out" of supervisory functions will not result in significant regulatory co-ordination problems.

86. The Working Party discussed potential PTS responsibility in relation to: dispute resolution and appeal procedures; technical systems; record keeping; reports of suspected breaches; and holding of client funds or securities. Some members considered that it would be sufficient for the PTS to provide details of dispute procedures and a description of the technical system to the regulator on the basis that these were largely matters between the system sponsor and participants to

funds are regulated by separate laws and were not seen to be a responsibility of the PTS sponsor.

87. Regulatory Issues for Consideration:

The PTS sponsor should inform and assure the regulator of any arrangements it makes for the monitoring, surveillance and supervision of the trading system and its participants with a view to ensure fairness, efficiency and investor protection as well as compliance with anti-fraud, anti-manipulation and other national securities laws regulating abusive market conduct. Where the system sponsor and provider of the regulatory services are different entities, the relevant entity or entities responsible for the provision of regulatory services should be clearly identified and accountable to the regulator.

Dispute Resolutions and Appeal Procedures

The PTS should provide details of any dispute resolution and appeal procedures to the regulator.

In addition, some Working Party members consider that the PTS sponsor should ensure that there are fair and efficient dispute resolution and appeal procedures, including procedures covering issues related to decisions on access or denial of access to the PTS and that all such disputes and complaints should be promptly reported to the regulator.

Technical Systems Standards and Procedures in Relation to Operational Failure²⁰

The PTS should provide details of technical system standards and operating procedures to the regulator.

In addition, some Working Party members consider that the PTS sponsor should ensure that systems have sufficient capacity so that they do not cease to function in periods of unusual volume or volatility, and that tests of the system are conducted to identify potential areas of vulnerability. The PTS sponsor should also ensure that there is adequate security of the PTS. The PTS sponsor should be required to develop and maintain contingency plans and procedures to provide for the protection of investors and the maintenance of an orderly market in the event of operational failure.

20 Note the relevant Principles for screen based trading developed by IOSCO Working Party No 7.

Record Keeping

The operation of a PTS should provide for effective monitoring and surveillance of transactions on the PTS. Accordingly the PTS should be operated in a manner which complies, at minimum, with all applicable record keeping and reporting requirements.

The PTS sponsor should be responsible for the implementation of sufficient audit trails for monitoring and the surveillance by both the PTS sponsor and PTS regulator of transactions occurring on the PTS. Regulatory reports should be made available on transactions, with the regularity required by the regulator, regarding trading information and trade execution to permit the regulator to monitor trading volume occurring on the system and to verify that a PTS sponsor is complying and/or enforcing compliance by participants with the conditions of any regulatory approvals and the national securities laws.

Reports of Suspected Breaches of the Law

The PTS sponsor should identify the action it takes to ensure the integrity of the trading system it runs and to avoid damaging the integrity of the wider market. It should also identify on a continuous basis the procedures for reporting suspected breaches of the laws to the regulator.

Procedures in Relation to the Holding of Client Funds and Securities

Where the PTS sponsor holds customer funds or securities in relation to transactions on the PTS, the PTS sponsor should demonstrate that procedures are in place to safeguard customer funds or securities, and to prevent misuse of customer funds or securities by the PTS sponsor and PTS participants in accordance with national regulatory requirements.

SUPERVISION OF THE SYSTEM AND PARTICIPANTS BY THE REGULATOR

88. The Working Party examined the role of the regulator in the supervision of the PTS system and its participants. Areas of responsibility addressed included: amendments to rules; system approvals; compensation arrangements; and trading halts. Some members considered that in the case of PTSs involving retail customers there should be access by those investors to compensation arrangements comparable to those applicable to similar types of transactions undertaken on the regulated markets in that jurisdiction. Other members considered that it was not appropriate

89. In relation to trading halts, Working Party members generally considered that the regulator should have the power to implement circuit breakers, other measures designed to ensure orderly markets and to require co-operation of the PTS sponsor in times of potential market disruption. Some Working Party members considered that these requirements, while relevant to the regulated markets, were not necessarily appropriate to PTSs.

Regulatory Issues for Consideration:

System Rule Amendments

Amendments to any system rules should be notified to or approved by the regulator when considered necessary by the regulator to ensure consistency with national securities laws and the continued fair, efficient and orderly operation of the system.

Rescind or Vary System Approval

Any approval of a PTS should be re-examined or withdrawn by the regulator if the PTS proves unable to comply with the conditions of any approval or in circumstances where its operation is inconsistent with national securities laws.

Compensation Arrangements

System participants and their relevant clients should at least be clearly informed about compensation arrangements for transactions on a PTS unless those arrangements apply in the same way as they apply on regulated markets and there has been general disclosure about those arrangements.

In addition, some Working Party members consider that in the case of transactions involving retail customers there should be access to compensation arrangements comparable to those applicable to similar types of transactions undertaken on a regulated market in that jurisdiction.

Trading Halts

Details of procedures for trading halts, other trading limitations and assistance available to the regulator in circumstances of potential trading disruption on the PTS or regulated market should be provided to the regulator.

In addition, some Working Party members consider that the regulator should have the power to order a trading halt or other trading limitation and require the assistance of the PTS sponsor in relation to transactions on the PTS where the regulator considers it necessary in the interests of fair and orderly trading on the PTS or on a regulated market.

CROSS-BORDER REGULATORY STRUCTURES

90. The allocation of responsibilities for regulation of cross-border proprietary trading systems involves responsibility for the regulation of the system. The basic regulatory framework for considering the options available in choosing the appropriate regulator for cross-border proprietary trading systems is as follows:

- home market regulation - regulation solely by the country where the market place is situated;
- shared regulation, where the system and the participant broker-dealers must register in each country in which the system operates. A primary home or lead regulator is not identified;
- shared regulation with a primary home market or lead regulator. The PTS registers in multiple countries and is subject to the investigatory authority of each regulator, while day-to-day regulation is delegated to the home market or lead regulator;
- universal regulation, ie. each jurisdiction in which market conduct occurs regulates the relevant activity within its jurisdiction.

CHOICE OF CROSS-BORDER REGULATORY REGIME

91. Universal regulation is adopted for internationally active broker-dealers. However, where market activity occurs in more than one jurisdiction, more than one regulator may assert jurisdiction over the same conduct or activity. Thus some co-ordination among regulators may become necessary to avoid investor confusion and regulatory costs.

92. Home market or lead regulation is one model for the allocation of regulatory responsibilities. However, for some cross-border proprietary trading systems it may be impossible or almost impossible to state with precision where the "home" market is located. One criterion to resolve this issue may be by deeming the home market to be the one where the market has set up its matching facility or, if no such facility exists, the market where the central administration of the facility is located. It will be necessary to develop practical solutions for the designation

94. Some Working Party members consider that in the medium term the most feasible arrangement may be some form of shared regulation with a home country as the primary regulator, as the host country will seek to retain some regulatory controls over the operations and conduct of the PTS undertaken in its jurisdiction. This may, however, involve some concessions in recognition of the nature of the entities involved and the existence of foreign regulation. Some of the issues that will need to be addressed include whether:
- the PTS and its foreign affiliates, where these are integrally involved in the operation of the system, need to be registered or authorised in the host jurisdiction; and
 - the securities quoted on the system will be subject to host country disclosure, trading halts or other requirements.
95. The following consequential issues require consideration under a scheme of shared regulation with a primary home regulator.
96. The first is what are the appropriate criteria for recognition by one jurisdiction of another jurisdiction's regulation of a PTS. A general principle is easy to state; its translation into practice somewhat more difficult. The principle may be that the level of supervision of the trading system in its home jurisdiction should be comparable to that of the jurisdiction in which it seeks to operate.
97. Difficulties arise because regulatory approaches, effort and market structures differ. Examples include different laws on market manipulation, insider trading, price stabilisation, short selling and a range of other areas that one or more regulators may regard as essential to the maintenance of the integrity of their own markets. A starting point is to agree on the basic regulatory principles that should apply to each element of the system as the basis for acceptance of primary home jurisdiction regulation. In some areas there will need to be continued efforts to harmonise key regulatory requirements at an international level.
98. The second issue is to identify which specific powers the host country should be able to reserve in relation to the operation of the system in its jurisdiction and whether a host country that is the primary market in particular securities: (i) should be able to generally impose higher regulatory standards; and (ii) impose higher standards in specific areas such as the approval of securities able to be traded on a system in the host country and halt trading for regulatory purposes.²¹
99. The third issue is the need for international co-operative arrangements between the relevant regulators to enable information sharing, dispute resolution procedures, investigation and enforcement action. At a minimum, consistent with the current UK model for recognition of foreign exchanges, this will require that the foreign

21 ICSA 1993, "Working Group Paper on the Regulation of Cross-Border Electronic Trading Systems", submitted to the ICSA Annual Meeting, April 27.

proprietary trading system operator agree to co-operate via information sharing and other mechanisms with the domestic regulator. Appropriate Memoranda of Understanding will be required between regulators.

100. The fourth issue is the question of the allocation of regulatory costs between regulators, system proprietors and market participants. These costs could result from the imposition of reporting requirements from market surveillance activity and from measures to ensure that participants observe the relevant system and regulatory rules. There is also concern that the proprietary systems will in fact impose costs on existing self regulatory organisations.
101. Regulators may also be required to address similar issues in relation to the allocation of regulatory responsibilities for participants who utilise the system. One issue to be addressed is whether participants transacting on the system and resident in another jurisdiction will require registration or authorisation in the host jurisdiction.
102. In the Ontario Securities Commission ("OSC") hearing into Instinet, for example, OSC staff commented that categorisation of foreign broker-dealer participants as market intermediaries in Ontario would require them to register under the international dealer category. This category was introduced to enable foreign market professionals and brokers not wishing to establish a presence in Ontario to undertake a limited range of activities with Ontario residents.

CONCLUSION

103. The purpose of this review has been to identify regulatory issues specific to the regulation of cross-border proprietary trading systems. It can be seen that many of the issues identified overlap substantially with other work currently being undertaken by IOSCO Working Parties. It is considered important that duplication be avoided.
104. The paper has sought to outline the general regulatory issues that will need to be addressed by regulators when faced with the emergence of PTSs. It has not sought to be prescriptive given the difference between regulatory approaches adopted across some jurisdictions and the wide variety of forms that PTSs may take.
105. It is proposed that the regulatory issues for consideration identified by the Working Party relating to PTSs be used by IOSCO members to guide their regulatory approach to PTSs in their own jurisdictions and on regulatory issues relating to the

Attachment A

IOSCO WORKING PARTY NO 2

REGULATORY ISSUES FOR CONSIDERATION APPLICABLE TO CROSS-BORDER PROPRIETARY SCREEN BASED TRADING SYSTEMS ("PTSS")

The objective of the discussion is to identify and explore the range of issues relevant to the regulation of PTSSs which regulatory authorities should consider in determining their regulatory approach to PTSSs.

The Working Party recognises that the introduction of PTSSs is a new and evolving issue and that many jurisdictions have so far limited or no experience of PTSSs.

The following non-exclusive points of consideration are proposed only to give guidance to countries to find the appropriate regulatory response in their jurisdiction to PTSSs and on regulatory issues relating to the cross-border operation of such systems. In particular, the Working Party recognises that each jurisdiction will need to resolve each issue consistent with the laws, rules and practices in each jurisdiction.

The primary focus of the Working Party's discussion of regulatory issues relates to PTSSs that automate the execution of orders to buy or sell, or that automate the dissemination or collection of quotations, orders to buy, sell and exchange securities, or indications of interest, and also provide a mechanism for matching or crossing orders in the system, or for otherwise facilitating agreement between participants to the basic terms of a purchase, sale or exchange of a security. It excludes trading and other systems owned and operated by exchanges. This definition also excludes systems that merely provide historical information about transactions (information providers) and those systems that automate the collection and transmission of orders by regulated intermediaries to a regulated market and do not provide any facilities for automatic matching, crossing or execution of those orders (internal order routing systems). Such systems may raise other regulatory issues. However, these are outside the scope of the Working Party's deliberations at this stage.

The key functions for the purposes of regulatory considerations in relation to a PTS were identified by the Working Party as follows:

- *Approval of the PTS Sponsor*
- *Admission of Securities to the PTS*
- *Admission of Participants to the PTS*
- *Provision of Information on Indications of Interest, Quotations, or Orders to Purchase, Sell or Exchange Securities*
- *Routing of Orders to a Trade Execution System*

- *Trade Execution*
- *Post Trade Reporting and Publication*
- *Clearing and Settlement*
- *Supervision of the System and Participants by the PTS Sponsor*
- *Supervision of the System and Participants by the Regulator.*

APPROVAL OF A PTS SPONSOR

The term "PTS sponsor" means any person or organisation who organises, operates, administers or otherwise directly or indirectly controls a PTS. The PTS sponsor should be a fit and a proper person in accordance with national regulatory requirements applicable to that category of activity, financially sound, competent to operate the system in compliance with national laws, and clearly accountable to the regulator.

Where the PTS sponsor assumes any principal, settlement, guarantee or performance risk, it is important to ensure compliance with prudential or other regulatory requirements applicable in that jurisdiction designed to reduce the risk of non-completion of a transaction in circumstances of a failure to perform by one or more parties. These requirements will differ according to the specific characteristics of the PTS system, system sponsor and system participants.

ADMISSION OF SECURITIES TO A PTS

The regulator should, as a minimum requirement, be informed of the securities or types of securities to be traded on a PTS to enable it to adequately oversee the maintenance of fair, honest, efficient and informed securities markets.

ADMISSION OF PARTICIPANTS TO A PTS

Access to the system should apply in a fair and non-discriminatory manner. The regulator and participants should be informed by a PTS of the criteria and procedures that will govern the grant or denial of access to a PTS of each specific category of participant.

In order to ensure financial soundness and integrity of PTSs there should be compliance

PROVISION OF INFORMATION IN RELATION TO INDICATIONS OF INTEREST, QUOTATIONS, OR ORDERS TO PURCHASE OR SELL SECURITIES - PRE TRADE INFORMATION

To enhance investor protection, market liquidity, price discovery and efforts of intermediaries to provide best execution the PTS should provide, at a minimum, information in relation to indications of interest, quotations, or orders to purchase, sell or exchange securities on the same basis to all similarly situated market participants. There should be a reasonable basis of any categorisation of participants for the purposes of access to pre-trade transaction information. Any differential access to such information should not unfairly disadvantage specific categories of participant, especially where such participants are unable to adequately assess for themselves the commercial risks involved in participation in the PTS.

ORDER ROUTING

Order routing procedures should be clearly disclosed to participants and the regulator, applied fairly to all similarly situated participants, and not involve any breaches of relevant national laws relating, among others, to client precedence, front running or other abusive market conduct.

The specific regulatory issues in relation to order routing on a PTS may depend on whether orders are transmitted to an organised regulated market or to other alternative trade execution and matching systems. If orders are transmitted to an organised market, the specific regulatory issues in relation to order routing on a PTS should be addressed to ensure fairness, efficiency and integrity of the market as a whole. The relevant regulated market's order routing, displacement, crossing and other rules should be taken into account in order to avoid any disturbance to the conduct of an orderly market that may be caused by procedural mismatching between the PTS and regulated markets.

EXECUTION OF TRANSACTIONS

The order execution algorithm is the set of rules that determines the processing and matching of orders entered into the system. A wide variety of order execution algorithms are possible. The order execution algorithm should be disclosed to the regulator and system participants prior to the operation of the system and be fairly applied to similarly situated system participants.

Where the exchange and PTS are linked in some way, the execution algorithm of the PTS should be assessed to avoid any procedural mismatching between the PTS and regulated market that may effect the orderly conduct of the regulated market.

POST TRADE REPORTING AND PUBLICATION

In order to enhance investor protection, address market fragmentation and enhance regulatory monitoring, information on completed transactions on a PTS should be provided on the same basis to all similarly situated PTS participants and reported in accordance with national requirements to the regulator. Where the information is considered by the regulator to be necessary for the protection of investors or the availability of a fair market, it should be made available to the market as a whole.

CLEARING AND SETTLEMENT

The regulator should be satisfied that adequate arrangements exist to facilitate the orderly clearing and settlement of transactions effected on a PTS.

Where the PTS provides for clearing and settlement, those services should be regulated according to national regulatory requirements and be designed to minimise risks in the settlement system.

SUPERVISION OF THE SYSTEM AND PARTICIPANTS BY THE PTS SPONSOR

The PTS sponsor should inform and assure the regulator of any arrangements it makes for the monitoring, surveillance and supervision of the trading system and its participants with a view to ensure fairness, efficiency and investor protection as well as compliance with anti-fraud, anti-manipulation and other national securities laws regulating abusive market conduct. Where the system sponsor and provider of the regulatory services are different entities, the relevant entity or entities responsible for the provision of regulatory services should be clearly identified and accountable to the regulator.

Dispute Resolutions and Appeal Procedures

The PTS should provide details of any dispute resolution and appeal procedures to the regulator.

In addition, some Working Party members consider that the PTS sponsor should ensure that there are fair and efficient dispute resolution and appeal procedures, including procedures covering issues related to decisions on access or denial of access to the PTS and that all such disputes and complaints should be promptly reported to the regulator.

In addition, some Working Party members consider that the PTS sponsor should ensure that systems have sufficient capacity so that they do not cease to function in periods of unusual volume or volatility, and that tests of the system are conducted to identify potential areas of vulnerability. The PTS sponsor should also ensure that there is adequate security of the PTS. The PTS sponsor should be required to develop and maintain contingency plans and procedures to provide for the protection of investors and the maintenance of an orderly market in the event of operational failure.

Record Keeping

The operation of a PTS should provide for effective monitoring and surveillance of transactions on the PTS. Accordingly the PTS should be operated in a manner which complies, at minimum, with all applicable record keeping and reporting requirements. The PTS sponsor should be responsible for the implementation of sufficient audit trails for monitoring and the surveillance by both the PTS sponsor and PTS regulator of transactions occurring on the PTS. Regulatory reports should be made available on transactions, with the regularity required by the regulator, regarding trading information and trade execution to permit the regulator to monitor trading volume occurring on the system and to verify that a PTS sponsor is complying and/or enforcing compliance by participants with the conditions of any regulatory approvals and the national securities laws.

Reports of Suspected Breaches of the Law

The PTS sponsor should identify the action it takes to ensure the integrity of the trading system it runs and to avoid damaging the integrity of the wider market. It should also identify on a continuous basis the procedures for reporting suspected breaches of the laws to the regulator.

Procedures in Relation to the Holding of Client Funds and Securities

Where the PTS sponsor holds customer funds or securities in relation to transactions on the PTS, the PTS sponsor should demonstrate that procedures are in place to safeguard customer funds or securities, and to prevent misuse of customer funds or securities by the PTS sponsor and PTS participants in accordance with national regulatory requirements.

SUPERVISION OF THE SYSTEM AND PARTICIPANTS BY THE REGULATOR

System Rule Amendments

Amendments to any system rules should be notified to or approved by the regulator when considered necessary by the regulator to ensure consistency with national securities laws and the continued fair, efficient and orderly operation of the system.

Rescind or Vary System Approval

Any approval of a PTS should be re-examined or withdrawn by the regulator if the PTS proves unable to comply with the conditions of any approval or in circumstances where its operation is inconsistent with national securities laws.

Compensation Arrangements

System participants and their relevant clients should at least be clearly informed about compensation arrangements for transactions on a PTS unless those arrangements apply in the same way as they apply on regulated markets and there has been general disclosure about those arrangements.

In addition, some Working Party members consider that in the case of transactions involving retail customers there should be access to compensation arrangements comparable to those applicable to similar types of transactions undertaken on a regulated market in that jurisdiction.

Trading Halts

Details of procedures for trading halts, other trading limitations and assistance available to the regulator in circumstances of potential trading disruption on the PTS or regulated market should be provided to the regulator.

In addition, some Working Party members consider that the regulator should have the power to order a trading halt or other trading limitation and require the assistance of the PTS sponsor in relation to transactions on the PTS where the regulator considers it necessary in the interests of fair and orderly trading on the PTS or on a regulated market.

IOSCO WORKING PARTY 7
PRINCIPLES FOR THE OVERSIGHT
OF SCREEN-BASED TRADING SYSTEMS
FOR DERIVATIVE PRODUCTS

The regulatory authorities responsible for oversight of screen-based trading systems for derivative products,¹ where governmental, quasi-governmental, or private ("relevant regulatory authorities"), should articulate the jurisdictional interest and supervisory principles applicable to the organizations responsible for the system such as an exchange ("system sponsor"), the organization or organizations which provides or provide the hardware, software, and/or the communications network and related services ("system providers"), the persons authorized to execute transactions on the system such as a broker-dealer ("system users"), and persons with financial exposure to the system ("system customers"). These principles should reflect the shared objectives of ensuring that, among jurisdictions, the levels of investor protection and regulation are adequate.²

To that end, it is suggested that jurisdictions adopt the following ten non-exclusive, general principles for the oversight of screen-based trading systems for derivative products which identify areas of common regulatory concern. It is understood that individual jurisdictions will take account of differences in national legal standards, regulatory policies, and market customs or practice in addressing these concerns.

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1. For purposes of these Principles, the term "derivative products" refers to those products in which the exchange or market ("market") itself is the issuer, which are subject to the rule of the issuing market, and for which a clearing organization is used to settle profits and losses, make deliveries, and guarantee cleared trades.
 2. The Principles set out in broad terms regulatory considerations arising from cross-border screen-based trading, and not the specific concerns of some members in respect of the particular laws applying to their jurisdiction (eg, those dealing with anti-competitive rules and practices, margin levels, or capital requirements).

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 custom 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 systems 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 among classes of participants should be identified.
5. 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 unauthorized access, internal failures, human errors, attacks, and natural catastrophes) which may exist in system design, development, or implementation.
6. 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.
7. The relevant regulatory authorities and the system sponsor should consider any 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 the 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.

Attachment C

ISSUES IN THE REGULATION OF CROSS-BORDER
PROPRIETARY SCREEN BASED TRADING SYSTEMS

To: IOSCO Consultative Committee

From: IOSCO Technical Committee Working Party No.2
on Regulation of Secondary Markets

Date: 13 October, 1993

1. **Background**

Technological advancement has produced two powerful, complementary phenomena: market automation and the globalisation of markets. Nowhere are these phenomena more apparent than in the development of cross-border screen based trading systems.

The IOSCO Working Party on the Regulation of Secondary Markets has been discussing the issues which relate to screen based trading systems operated by non-self-regulatory organisations through which cross-border trading is conducted (hereafter "cross-border proprietary trading systems").

The Working Party commenced its examination by surveying the approaches of individual jurisdictions to the regulation of Proprietary Trading Systems (PTSs) in their jurisdiction. The different regulatory approaches which are a function of each jurisdiction's particular history, structure of relevant legislation and attitude to the importance of a central market place and fragmentation, resulted in the Working Party generally agreeing that it would be difficult to reach a consensus on the issue of a definitive regulatory approach and that it would be more useful to explore generally relevant regulatory concerns to assist authorities to determine their attitude to PTSs.

The Working Party is currently considering issues relevant to the development of a non-prescriptive analytical framework to assist in the assessment of regulatory issues in relation to PTSs, especially those that operate cross-border.

The Working Party is focussing on the specific elements or functions performed by a system in order to identify the key regulatory concerns involved in relation to each element. It is recognised that the regulatory issues will be influenced by the specific purpose, organisation and operation of each PTS.

In exploring the regulatory issues it is critical to focus on the objectives of a regulatory scheme for cross-border proprietary systems:

- that fair, efficient, and orderly markets are maintained;
- that investors are protected from fraud and manipulation; and
- that innovative and competitive efforts are not stifled.

2. Questions and Issues

In order to facilitate the Working Party's deliberations it would be of assistance to have the benefit of the views of the Consultative Committee based on its members' experiences and expertise as market practitioners.

The Working Party believes that the Consultative Committee's views on the following general matters would be most useful at this stage.

1. What in the view of the Consultative Committee are the likely developments in PTSs over the next 3-5 years and what are the commercial and other forces behind such developments?
2. How have Consultative Committee members reacted to their own supervisory responsibilities in relation to PTSs that have sought membership of the relevant SRO or exchange?
3. What key elements or functions of a PTS relevant to market circumstances, system operation and investor's behaviour does the Consultative Committee consider should be the focus of the proposed analytical framework?

In relation to point 3, the Working Party is undertaking further considerations of the following matters.

- What core elements or functions of a PTS should the non-prescriptive framework focus upon?
- What is the best way to describe and categorise such elements or functions so that they are meaningful across a range of jurisdictions, variety of regulatory regimes and different types of PTSs?
- What regulatory considerations exist for each element or function of a system and how are these regulatory issues influenced by the purpose, organisation and operation of each type of PTS?

The Working Party considers it would be beneficial to have the views of the Consultative Committee on these questions.

(Explanatory Note on Question 3)

This note is to clarify the terms key "elements" or "functions" of a PTS used in Question 3.

In evaluating the regulatory issues that arise regarding cross-border proprietary trading systems, the Working Party has considered the various elements or functions performed by PTSS. The Working Party has tentatively developed a list of elements or functions that frequently are performed by PTSS as follows.

List of functions or elements

1. Information about the Systems Sponsor/Proprietor	9. Access to System	17. Regulatory Reports on Transactions
2. Specific Requirements when the System Sponsor Assumes Counterparty Risk	10. Participants Requirements	18. Reports of Suspected Breaches of the Law
3. Types of Securities Traded	11. Clearing and Settlement	19. Supervision of the system to Ensure Compliance with the Law
4. Interaction with Organised Markets/Concentration Requirements	12. Supervision of the System and Participants	20. Procedures in Relation to the Holding of Client Funds
5. Order Routing	13. Dispute Resolution and Appeal Procedures	21. Plan or Rule Amendments
6. Executing of Transactions	14. Technical System Standards	22. Rescind or vary System Approval
7. Pricing and Liquidity	15. Procedures in Relation to Operational Failure	23. Fidelity or Compensation Mechanisms
8. Trade Reporting/Display of Market Information	16. Record Keeping	

The above list is tentative. It may be changed depending upon further examination at the Working Party. Functions included in the list do not necessarily imply the Working Party's judgement regarding necessity of regulations on all or any of the elements.

Consultative Committee members are requested to evaluate the list and identify whether such functions are the proper focus of the Working Party's analysis. Consultative Committee members are also requested to identify any additional functions they believe may be relevant to the Working Party's analysis.

IOSCO Working Party No.2 on Regulation of Secondary Markets

Summary of Responses to the Questionnaire on PTSs
from the Consultative Committee

Q1. What in the view of the Consultative Committee are the likely developments in PTSs over the next 3-5 years and what are the commercial and other forces behind such developments?

(New York Stock Exchange, United States)

- PTSs will continue to proliferate over the next three to five years, because of the benign regulatory environment, the increasing appetite for institutions to disintermediate, lower cost of technology and the increasing liquidity of institutional positions.

(Conseil des Bourses de Valeurs, France)

- It is likely that over the next three to five years the PTS will benefit, at least in Europe, from a favorable environment for its development, for the technical, economical and political reasons such as progress in the field of teletransmission, improving custody activity, development of institutionalization and disintermediation, low transaction cost and application of ISD.

(Japan Securities Dealers Association, Japan)

- In Japan, the possibility seems small that any PTS covering Japanese listed issues begins functioning within 3 to 5 years. Whether such move will be expedited will depend on the pace of the liberalization of stock brokerage commissions in Japan.

(Sydney Futures Exchange Ltd., Australia)

- Developments in PTS over the next 3 to 5 years would be for them to

(National Association of Securities Dealers, Inc., United States)

- In the US, over the next three to five years the most likely development will be the consolidation of PTS that currently provide certain basic functions, with new systems experiencing commercial success only if they either provide significantly new functionality or clear cost advantage. Systems that already exist will experience a growth in volume with a consequent increase in the tiering of markets between individual and institutional investors.
- Globally, PTS over the next five years will expand to meet the needs of the international trading community unless restricted by regulatory requirements burdening the introduction of cross-border systems.

Q2. How have Consultative Committee members reacted to their own supervisory responsibilities in relation to PTSs that have sought membership of the relevant SRO or exchange?

(New York Stock Exchange, United States)

- The Exchange has no such requirements for members with PTSs and such members must meet all of the requirements (although no more) than any broker/dealer seeking membership in the New York Stock Exchange.

(Conseil des Bourses de Valeurs, France)

- The CBV has admitted INSTINET as a member of the Paris Market. This stock broking firm respects all the constraints under which a member of the market operates; in particular, it is forbidden from compensations the orders which it receives.

(Japan Securities Dealers Association, Japan)

- If a PTS were treated as broker-dealer, the PTS would join the JSDA, a self-regulatory organization as a securities company.

(Sydney Futures Exchange Ltd., Australia)

- As of this date no PTS has sought membership of the SFE.

(National Association of Securities Dealers, Inc., United States)

- Admission to NASD membership of a new PTS is no different than admission

to membership of any new broker-dealer.

- Similarly, the NASD examination process for a member operating a PTS is the same for a member not operating a PTS. Trades effected through a PTS are reported to the NASD and so are part of the equity audit trail and surveillance procedures that monitor trading real-time to detect suspicious patterns of trading.

(Deutsche Börse AG., Germany)

- INSTINET is purely an agency-broker. It is obliged to comply with the same rulings to which an Unofficial Broker (Freimakler) adheres. No additional regulations have been drawn up at the present time with respect to PTS.

Q3. What key elements or functions of a PTS relevant to market circumstances, system operation and investor's behaviour does the Consultative Committee consider should be the focus of the proposed analytical framework?

(subquestions)

- What core elements or functions of a PTS should the non-prescriptive framework focus upon?
- What is the best way to describe and categorise such elements or functions so that they are meaningful across a range of jurisdictions, variety of regulatory regimes and different types of PTSs?
- What regulatory considerations exist for each element or function of a system and how are these regulatory issues influenced by the purpose, organisation and operation of each type of PTS?

(New York Stock Exchange, United States)

- The list of functions set forth in Working Party No.2's questionnaire breaks down a market into all of its functional elements and all of those elements required more or less of a regulatory response.
- It would seem that PTS and traditional market regulation should specifically concentrate on market structure and execution questions as opposed to more general propositions.

functions or related activity that should be specifically regulated with respect to each market's structure. All the other functions are those areas where we believe a more general recognition is appropriate and the same regulation should apply to each market regardless of how it operates.

(additional comments)

- We believe that our quest to further enhance the technology of markets must not be at the expense of the basic protections that we have provided to the investing public.
- We believe that regulation of participants in our securities markets should be governed by the principle of "functional regulation": entities that perform similar functions should be subject to similar regulation.
- Firms that establish a market place for providing executions of transactions in securities pursuant to their own trading rules should be regulated in a manner similar to exchanges.
- The appropriate level of regulation for trading systems probably lies somewhere between the plenary regulation of exchanges and the complete lack of regulation of private dealer trading systems.
- The regulatory review should cover such areas as the execution parameters, access to the system, financial and operational integrity and back-up capability, governance of the system, fees, and the ability of the system operator to regulate trading in the system.
- We believe that all SRO trading systems, PTSS, exempt exchanges and private dealer trading systems must provide the public with full access to their quotations and last sale information.
- Segregating institutional orders from smaller retail orders could lead to a "tiering" of the market, raising significant market structure issues.
- Consistent with the Congressional NMS principles, all of the systems (a registered exchange, an exempt exchange, registered securities association trading system, PTS or private dealer trading system) must encourage order exposure and order interaction for all customer orders.

(Conseil des Bourses de Valeurs, France)

- Core elements or functions which should be focused upon are as follows;

- No.6 Executing of Transactions
- No.8 Trade Reporting/Display of Market Information
- No.9 Access to System
- No.10 Participants Requirements
- No.12 Supervision of the System and Participants
- No.2 Specific Requirements when the System Sponsor Assumes Counterparty Risk

- Categorization of such elements or functions could be as follows;

- a) Membership
- b) Mode of functioning
- c) The control of the system

- A PTS acts like a "Private Club" which functions on the basis of private rules. The only role for the Public regulators should be:

- to be sure that the adherents respect the given rules which limit their operations according to their financial capacity.
- to insure that the investors, whose orders are executed on a PTS, are well informed about the unregulated nature of this market.

- Only one class of a regulated market should exist and not several under varying degrees of regulation.

(Sydney Futures Exchange Ltd., Australia)

- The primary focus should probably be on:

- No.2 Specific Requirements when the System Sponsor Assumes Counterparty Risk;
- No.4 Interaction with Organised Markets/Concentration Requirements;
- No.6 Executing of Transactions;
- No.8 Trade Reporting/Display of Market Information;
- No.9 Access to System;
- No.12 Supervision of the System and Participants;
- No.17 Regulatory Reports on Transactions;
- No.20 Procedures in Relation to the Holding of Client Funds;
- No.23 Fidelity or Compensation Mechanisms; and

- The regulatory considerations which exist for each element or function must be the fundamental issues of market integrity and retail investor protection. All systems, elements or function of PTSs must be geared to meet these fundamental issues to the same high standards as exist at exchanges.

(National Association of Securities Dealers, Inc., United States)

- The most important elements of the regulation of PTS should be consideration of the quality of executions, transparency of quotations and executions, capital adequacy and automation reliability.
- The piecemeal, micro-functional framework suggested by the question is fundamentally flawed. The analysis of "function" should relate to the micro-economic function (market, individual intermediary, settlement, or information vendor).
- The regulatory treatment of the different elements or micro-operations of a PTS listed in the table should not be considered separately or individually. The overall economic function of a PTS ought to be analyzed to determine if regulation as individual intermediary (in US terms, broker-dealer), market (in US terms, either "exchange" or "association"), information vendor (securities information vendor, in US terms), or clearance and settlement organization is more appropriate.
- The core distinction between a "market" and an "individual intermediary" is that markets organize liquidity across a group of unrelated, unaffiliated individual liquidity providers (principals) and seekers (agents), while individual intermediaries provide or seek liquidity directly for their customers.
- IOSCO should focus on defining the four broad categories or micro-economic functions which should each then be subject to equal regulation.
- A system seeking to operate cross-border should be given mutual recognition by host countries where that system's home country offers comparable regulation.

(ICSA 15 recommendations)

- (1) National regulators should adopt as a long-term goal a shared regulation/primary market regulator framework for cross-border trading systems.
- (2) As an initial step to implementing a home/host country approach to

the regulation of cross-border trading systems, national regulators should begin discussing the harmonisation of transparency, approach to market structure, and surveillance/enforcement cooperation issues discussed below.

- (3) National regulators should adopt as a short-term goal a modified home/host approach to regulation of cross-border trading systems, with host countries being permitted (but not required) to make specified general and specific reservations of powers.
- (4) National regulators should consider seeking the removal of any statutory or other legal impediments to a shared regulation/primary home country regulator framework by seeking the power to defer to the regulation of a system's home country regulator if the host can determine that the home country's regulation of the system is comparable to the host country's regulation.
- (5) National regulators should begin working on a flexible framework for designating a "primary home country regulator" that could be used when the other preconditions for a shared regulation/primary market approach (such as harmonisation of essential regulations) are satisfied.
- (6) For matters not specifically discussed in this paper (transparency, approach to competition, listing standards, trading halts, enforcement/surveillance cooperation), national regulators should adopt general principles similar to those recommended by IOSCO in its report entitled "Screen-based Trading Systems for Derivative Products."
- (7) The international regulatory and self-regulatory community should develop consultation principles that will establish the circumstances in which prior consultation between the home country and host countries is required within the context of a home/host country regulatory regime.
- (8) Host countries should be allowed to reserve generally the power to impose standards higher than the initial harmonised minimums in order to ensure equal regulation within the host country until comprehensive global standards are developed.

securities offered only for institutional participants.

- (10) Authority to halt trading for regulatory reasons on cross-border trading systems' terminals located in host countries should be left with the host country and whenever a primary market regulator calls a regulatory halt all other jurisdictions in which the security trades should be notified.
- (11) Regulators, self-regulators, and markets should seek to develop common standards for disseminating publicly firm quotations and small trade reports.
- (12) IOSCO should continue its work on market transparency with a view to developing a consensus on minimum transparency standards for large trades in similar systems operating in similar market contexts.
- (13) Regulators and self-regulators should develop a framework for addressing market structure issues that takes into account the realities and benefits of global competition for order flow, emphasises the market centralizing effects of transparency, and facilitates cross-border competition to the maximum extent consistent with national prudential policies, including realistically enforceable market centralisation policies. In this connection, some Group members recommend that consideration be given to the compromise reflected in the ISD that permits off-market trading if the customer expressly authorises such trading.
- (14) Regulators, markets, and self-regulatory organisations (SROs) should continue their efforts to harmonise information sharing and cooperation procedures, and develop standards for consultation between a primary home market regulator and host country regulators that could be used in a shared regulation/primary market home country approach.
- (15) In countries which permit the operation of proprietary trading systems, regulators should adopt a regulatory framework similar to the SEC's proposed Rule 15c2-10 to ensure that PTS either undertake equivalent regulatory responsibilities directly or contract this responsibility out to an appropriate regulatory authority.

(Deutsche Börse AG., Germany)

- We want to stress the point that competition should be placed on a fair footing for everyone. What we need is a level playing field.
- PTS should be made to comply with a certain set of transparency rules.

PTS should keep audit trails and likewise ensure that all information that is required for the orderly supervision of transactions is made available to the competent regulator. The most important feature of a regulatory framework for PTS is disclosure, i.e. that sufficient information is provided to the regulator so that he knows what is going on in the PTS and how the system functions.

- No.3 Types of Securities Traded: No regulations should be established for determining what types of securities may be traded or not. It would suffice if the regulator were to be only informed about what securities are listed on an exchange.
- No.4 Interaction with Organised Markets/Concentration Requirements: Concentration rules for fostering market liquidity are not necessary. Integration of markets is brought about when market participants are provided with a sufficient level of information and a high degree of transparency.
- No.5 Order Routing: It should be left up to the PTS to decide what manner of order-routing should be implemented.
- No.8 Trade Reporting/Display of Market Information: Regulations are needed to prevent PTS from possibly profiting from information free-riding. At least a minimum standard should be set with respect to what specific market data should be publicly disclosed.
- No.9 Access to the System: Both the public and the regulator should be informed about the requirements necessary for gaining access to the system. The regulator should be empowered to protect potential participants from discriminating treatment.
- No.10 Participants Requirements: The financial integrity and professional qualifications of potential participants should be carefully screened before a decision is taken on their admission to trade. Regulators should be informed of the participants requirements and unanimously agree to them.
- No.11 Clearing and Settlement: PTS should have the option of deciding what type of clearing and settlement system is preferable.

managing and settling conflicts.

- No.14 Technical Systems Standards: Regulators should not attempt to prescribe the technical components of a system or set detailed standards for its operation. Of course, a PTS (like stock exchanges) must provide the regulator with a description of its technical systems.
- No.16 Record Keeping and No.17 Regulatory Reports on Transactions: PTS should be held to comply with the same standards as the stock exchanges adhere to with respect to reporting to the regulator and the filing of audit trails.
- No.23 Fidelity or Compensation Mechanisms: The matter of whether compensation schemes should exist and to what extent compensation should be granted belongs within the competitive realm and should be left up respectively to the stock exchanges and PTS to decide upon.
- It is our opinion that functions No.1, 2, 6, 7, 15, 18, 19, 20, 21 and 22 should not be explicitly regulated.
- FIBV stresses, in a "Report on Regulation of Electronic Securities Markets" on August 5, 1993, that the overall goal of regulation should be a level playing field for all participants. Regulation requirements should be tailored to the individual systems and should not be identically mandatory for all systems. Seven areas to be regulated have been identified:
 1. Terms and conditions of access to the market;
 2. Transparency of last sale prices and pre-trade quotation of prices;
 3. The comprehensiveness of the transaction audit trail and its availability to operators and regulators of related markets;
 4. Technical suitability, capacity and back-up of systems;
 5. Financial integrity of the participants;
 6. Capacity and resources to self-regulate and control the electronic system;
 7. Management of conflicts of interests in order to protect investors.

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