

Market Access Subcommittee
Interim Report

*Best Practices for Organized
Electronic Markets*

Commodity Futures Trading Commission
Technology Advisory Committee¹

27 November 2001

¹ The members of the CFTC's Technology Advisory Committee are listed in Attachment I.

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Mission Statement

Mission of the Market Access Subcommittee²

The mission of the Market Access Subcommittee includes (1) addressing the public policy aspects of the nexus between applications of technology to organized markets and how those applications of technology might be used to facilitate or to frustrate fair and equitable access to organized markets by all relevant market participants and (2) assisting the Commission through the Technology Advisory Committee, in fulfilling its mission statement, in particular, "...analyzing the application of new technologies in financial services and commodity markets, as well as by market professionals and market users, particularly in the areas of system capacities and readiness, order flow practices, and clearing and payment activities..."

Organized markets may operate in physical, automated or electronic venues. The Market Access Subcommittee has completed its review of market access issues germane to organized markets operating in electronic venues. The work of the subcommittee should continue, allowing it to address issues unique to organized markets operating in automated and physical venues. At this time the subcommittee's recommendations and best practices for electronic venues is submitted to the full Technology Advisory Committee for its review, as its Interim Report.

Background

The costs of regulation and market access preferences, over time, should produce real economic benefit to public market participants in a proportion that is roughly equivalent to the associated public costs. That is, the real economic costs of (1) public sector regulation; (2) private sector regulation (e.g., rules adopted by organized markets and self regulatory organizations); and (3) applications of technology, privileged market access and trade processing conventions adopted by organized markets should be balanced against a reasonable expectation of proportionate and concomitant public benefits (presumptive responsibility). In particular, the Market Access Subcommittee has been guided by (2) and (3) above.

Market Access Efficiencies

Dramatic changes in computing and communications technology can now make decision critical information available, real-time, anywhere in the world, in a form that can easily be exchanged with other parties, at a marginal cost of nearly zero. This makes it both technically feasible and cost-effective for market participants to enter into transactions on electronic market venues that heretofore would otherwise have been too costly to

² The members of the Market Access Subcommittee are listed in Attachment II.

undertake. Even the pure economics of inaugurating and maintaining new markets have changed. In contrast to the more customary expenses of physical market venues, the new economics of modern organized markets are measured in kilobytes, nanoseconds and bandwidth.

Privileged Market Access

Market participants with either superior market information or superior market access, over time, will have a considerable and arguably unfair market advantage over those whose market information or market access is subordinate. In physical markets, clients must open accounts with futures commission merchants (FCMs); their orders must be filled by registered floor brokers, and the trade processing conventions of the physical environment ostensibly mandate trade intermediation at execution (floor members have the opportunity to execute their trades opposite the orders of customers).

All electronic environments are very different. Mandated trade intermediation at execution has been largely replaced by the time/price paradigm.³ There are no registered floor brokers in an all electronic market. Some new electronic markets have no FCMs, or any trade intermediaries at all.

Privileged market access refers to any rule, policy or processing convention of organized markets that discriminates between classes market participants when providing any of their services, access to their services, or access to market critical information. There are other market privileges more specific to marketmaker structures that are addressed in that section of this Interim Report.

Market Structure

Virtually all theories that form the foundation of presumptive responsibility, public sector regulation and private sector rules and processing conventions have been originally based upon the model of organized markets operating in a physical venue. Worldwide, many organized markets are gravitating to all electronic, screen-based venues. Many organized markets, historically operating exclusively as physical venues are currently in a hybrid cusp of highly automated physical venues. Newer organized markets, particularly those outside the U.S., are electronic and have never been otherwise. Where present, this migration continuum of physical, to automated, to electronic venues has veritably always been accompanied by a diminished need for and hence, a decreased presence of

³ An order from any class of market participant with the oldest time stamp, within a limit price will be executed firstly. There are many other trade match algorithms. Some match proportionately against all opposite orders at the same limit price. Others give priority to a market participant that “turns” the market. Most importantly, these are all quantifiable economic criteria that can be automated without subjectivity and which do not, in and of themselves, provide a market advantage or other market preference to any market participant or class of market participant.

processing intermediaries and, therefore a diminished level (or a complete absence) of presumptive responsibility for trade processing intermediaries to continue to assume.

Supervisory Oversight

As the means of accessing markets and the costs of such access have been dramatically reduced, the continued presence of these privileged market access structures continues to involve a public cost. This public cost comes with a presumption that these privileged market access structures and mandated trade processing intermediaries are accompanied by a concomitant public benefit, most likely a high standard of performance. Many of the provisions of the Commodity Exchange Act (as it applies to Designated Contract Markets) and of organized markets' rules were originally based on the presumption that exchanges would continue as physical trading venues and that order transmission, execution and confirmation media would continue to be dominated by telephone and paper.

The Commodity Futures Trading Commission Act (the "CFTC Act") enacted in 1974, substantially updated the Commodity Exchange Act (the "Act"). However, the context for that effort was an environment of "brick and mortar" marketplaces and high costs of accessing markets other than through "tiers" of market intermediaries. Trade intermediaries, segregation of client funds and other initiatives were present by virtue of regulations and/or organized markets' rules and processing conventions.

Structured Approach

Regulations, rules, processing conventions and the application of technology (as they affect market access) should be fundamentally as different for physical, automated and electronic venues as the processes of those respective venues differ from each other. Equally, the presumptive responsibilities of processing intermediaries that have been granted market access privileges, in any venue, should remain proportionate to the public costs of being granted those market access privileges, particularly now, with the observable migration of markets from physical, to automated, to electronic venues.

The continued application of private sector rules, structures and processing conventions that were developed and presumably justified in an environment where market access was not global in scope and achievable at declining costs, may serve to perpetuate privileged market access by market participants or classes of market participants as these organized markets continue to migrate from physical, to automated, to electronic.

Structure should be developed that would address and review the continued appropriateness of applying regulations, private sector rules, processing conventions and the application of technology (as it may affect market access) that were developed for physical venues to automated venues and electronic venues to ensure that (1) privileges of classes of market participants are not perpetuated solely by the phenomenon of

migration of organized markets from one venue to the next: and (2) the privileges of classes of market participants in all venues should be re-justified by an analysis that weighs the public benefits against the public costs of such privileges. This analysis should include a discussion of the relevant public policy issues raised and must involve input both by organized markets whose venues provide such privileged access and by market participants whose market access would be deemed as subordinate.

Best Practice Recommendations

I. Bandwidth, Order Eligibility and Flickering Quotes

Bandwidth

Bandwidth is defined as the total end-to-end electronic processing: the receipt of orders from the client to the venue of the order book. This is not exclusively transmission (communications line) time.

Recommendation I A: An organized market operating an electronic venue should not ration the processing capabilities (bandwidth) of its automated order processing systems in any way that would create or maintain a market access preference for any market participant or class of market participant.

It is understood that the presence of credit controls would have the manifest tendency to take longer to process end-to-end as defined above. Given this constraint, all orders subject to credit or similar types of filters must be processed in a way that would not create or maintain a market access preference for any market participant or class of market participants. In an attempt to circumvent this best practice, organized markets should not mandate that entire classes of market participants' orders be subjected to credit control processing, where there are arguable and distinguishing differences (in credit quality) present in that class of market participants. Doing so could only be deemed a tactic to intentionally provide preferential market access to a class of market participants by intentionally delaying the receipt of their orders (into the order book).

Recommendation I B: Organized (electronic venue) markets should maintain the operating capacity to operate their electronic markets (including order entry systems), even on remarkable market days, without noticeable and significant system processing degradation.

The subcommittee recognizes, especially when trading options products in an electronic market venue, that computer (or other automated) generated bids and offers will need to be near continuously refreshed as the price of the underlying product (or volatility) change. This will necessarily consume large portions of the end-to-end processing bandwidth of the affected organized market. As organized markets provide a public

benefit by providing price transparency into their respective markets, bids and offers that are frequently refreshed (principally through “cancel/replace” orders) provide a significant public benefit. The adequacy of organized markets' processing bandwidth should be examined and reviewed by their respective outside audit firms and by national authorities.

The subcommittee recognizes that maintaining and upgrading an organized market's (*electronic* venue) end-to-end processing bandwidth necessarily involves a significant and concomitant expense. Organized markets may recapture this “capacity” expense by charging fees to those market participants that consume its processing bandwidth, proportionate to usage⁴ of such processing bandwidth. *An organized electronic market which experiences no discernible order entry system degradation on remarkable market days but which recaptures the expense of maintaining the bandwidth to do so, is preferable to an organized electronic market that routinely experiences order queuing delays and charges no such fees to recapture the expense of providing its order entry bandwidth which might otherwise ameliorate such queuing delays.*

The subcommittee recognizes that all organized electronic markets must have *some* capability to queue incoming orders to otherwise prevent the trade match engine from becoming overwhelmed and from crashing. In all such cases organized markets should (1) ensure that market participants have access to the "rules of engagement" under which all such queuing algorithms operate; (2) attempt to implement the queuing as close as possible to the point of entry of the order (the furthest from the order book); (3) use time exclusively (FIFO) as the basis for subsequently releasing queued orders into the order book; and (4) ensure that no queuing algorithm could otherwise create a market access privilege for any market participant or class of market participant. Implementing the queuing process as close as possible to the client also puts more control into the hands of the client, ensuring that they are promptly informed that some portion of their orders are now subject to a trades per second queue. The client could then better manage its own order output stream, knowing when a queuing threshold has been triggered, and when such queue is no longer operating.

Order Eligibility

Recommendation I C: An organized market operating an electronic venue should not operate any order processing system, pass any rule or allow any order processing conventions that impose any restrictions (other than the presence of credit filters or automated incoming order queuing algorithms) or otherwise discriminate between computer generated orders versus non-computer generated orders.

This prohibition is universal and is otherwise independent of any class of market participants. Applications of technology should not be used to create or to maintain privileged market access.

⁴ Market participants that have a ratio of quotes (orders) to executed trades higher than that which is more typical of that product/venue should expect to pay a higher proportion of trade submission fees.

Recommendation I D: An organized electronic market should not, under any circumstances, ration or throttle its order processing operating bandwidth by establishing or maintaining restrictions on types of orders, or class of market participants.

Flickering Quotes

The subcommittee addressed the issues associated with flickering quotes within the context of the challenges of providing robust bandwidth in electronic market venues. Price injection (ostensibly only to improve one's queue position in the order book) has become problematic. The consensus of the subcommittee is that flickering quotes are not bad; they are real quotes that are subject to immediate acceptance. However, *bandwidth congestion* as a side effect associated with flickering quotes is detrimental.

There are significant public benefits associated with valid and robust price discovery. Flickering quotes may consume more bandwidth than they contribute to bona fide price transparency. Said another way, while not being illegal, flickering quotes often involve more public costs (by congesting bandwidth) than they provide public benefit.

Restricting order entry bandwidth may constrict (depending on the levels at which order queuing commences) price transparency as some bona fide quotes will be delayed or rejected at the order entry gateway. If markets had free and open bandwidth, even with machine gun quotes, the market would be alert and able to deal with potential abuse.

Best practice would be for organized markets operating electronic venues to provide sufficient order entry bandwidth so that, even during active markets, there would not be significant observable system performance degradation. In order to pay for such robust bandwidth, market participants would pay fees for bandwidth usage. However, all organized markets operating electronic venues, even those with the most robust order entry bandwidth still need to have the capacity to queue orders at the order book gateway, but to do so without discriminating among market participants or classes of market participants.⁵

II. Block Trading, and Internalization of Order Flow

From a public policy perspective, block trading is, on net, beneficial. Providing an appropriate structure (and assuming that the subcommittee's best practices are assimilated) to accommodate block trading on electronic venues has the potential to attract some portion of privately negotiated contracts, agreements and transactions that would otherwise be executed away from organized markets, back onto organized markets. By doing so, these large transactions would improve price transparency, add to liquidity, provide revenues, become assimilated into the audit trail, become subject to private sector rules and public sector regulations and quite likely benefit from all of the

⁵ The subcommittee is uniformly of the opinion that the generation origin (manual versus computer generated) of orders should never be the basis of discrimination.

advantages routinely associated with the clearing process. Therefore, block trading of large orders on electronic venues is to be encouraged. The entire remainder of this section constitutes the subcommittee's recommendation.

Minimum eligible quantity

Orders that could be block traded off the electronic market must be of an appropriate quantity. The minimum permissible quantity threshold for executing block trades on electronic market venues will change as liquidity in that product/market change from time to time. In general, the minimum quantity should be large enough that it represents a marked departure from the size of otherwise large orders that can be readily observed as being executed in that electronic product/market. For an order to be eligible to be block traded, it need not be *remarkable* in size, but its size should be substantial enough that it would move the market substantially and that by directing that order to the market, a commercial market participant would have every expectation that (1) the market effect would be temporarily and unnecessarily disruptive, and (2) the order would likely be executed at an average price that would reasonably be deemed to be *uncommercial*, relative to the underlying cash market for that derivative product or with respect to the market price for correlative products at that time.

Status of resting disclosed orders in the order book

In a single electronic venue, an FCM taking the opposite side of a block trade, should be obligated to take out all disclosed resting bids and take the remainder of the orders at the block price as principal. Under virtually all (block trade) circumstances, the practice of allowing block orders to take out resting displayed orders at their respective limit prices would serve to the detriment of those affected market participants (when compared to the subcommittee's subsequently suggested alternative), rendering their resting orders as veritable "market road kill" by block trades which were never even displayed in the order book. Market participants should receive incentives for leaving resting orders in the order book and not be penalized.

The subcommittee's approach distinguishes between displayed and undisplayed resting orders and rewards the former for their valuable contribution to enhance the price transparency of the relevant market venue. The consensus proposal that (in the instant example) resting displayed bids get filled at the lower "block" price provides a financial incentive to all market participants to enter orders into the order book. In return, not only would they not potentially be "run over" by a block trade, but they would also have some significant possibility of receiving price improvement at execution.

It was noted that (in the example developed by the subcommittee) the block seller would have access to the same information in the order book that every other market participant would have. It is reasonable to assume that any experienced block trader (in our example) knows that his/her order is going to take the market down to significantly lower levels. Getting the entire order filled at a not unreasonable average price is of paramount

importance; otherwise the block seller's request of an FCM for a block trade quote would not have received serious consideration.

First and foremost, the block seller always has the option of entering a market sell order into the order book to take out the resting bids (disclosed and undisclosed) at their respective prices⁶ or requesting a block order bid from an FCM. If the block seller thought that the price improvement that might be gained by entering a large market order and subsequently requesting that an FCM provide a quote for a (bid) for the residual quantity⁷ outweighed the likely merits of requesting a block price for the entire quantity, the block seller could always do so. Were the block seller to pursue this strategy, the block seller would direct the FCM to access the disclosed resting bids in an agency capacity to fill a portion of the block trade while filling the remainder of the block trade as principal. The disclosed resting bids would be executed at their limit price and thus, the FCM would, consistent with its agency obligations, obtain price improvement for its customer's block trade. Such handling of block trades would be consistent with the subcommittee's position that block trades should be encouraged to be executed through the electronic venue.

Undisplayed resting orders (reserves)

Undisplayed reserves should not be granted equivalent priority to displayed orders when participating in an execution of a block trade. Orders eligible for preferred priority should be those orders that, as a group were visible (price and actual quantity) in the order book. A market venue that provides market participants visibility into a robust order book provides significant public benefit. While undisplayed reserves may contribute to the liquidity of an organized market venue, by definition, they contribute virtually nothing to enhance transparency of the order book. The time priority of undisclosed reserves being refreshed after the block trade has been completed is addressed in the detailed example.

⁶ It is entirely conceivable that some electronic venues' policies could include the stipulation that market orders also take out undisclosed reserves. The subcommittee provides no recommendations regarding the public policy implications of permitting undisclosed reserves.

⁷ This *combination* strategy could potentially leave a residual unfilled quantity that would not then satisfy the minimum quantity for a block trade.

Detailed Example

The subcommittee agreed that the best way to summarize its recommended best practice for block trading was to do so with an example that would address all of the issues that the subcommittee deemed relevant to recommending a best practice. The reference example that was used by the subcommittee focuses attention on the relevant issues and is included immediately below.

The venue for the subcommittee's example is a monopoly market; that is, there are really no other electronic (venue) markets that operate during substantially the same time zones for a fungible product and that are considered by a significant proportion of commercial market participants to constitute a bona fide source of price transparency. The prevailing market is xx.24 bid and xx.25 offered. The market is typical; there are bids in the order book below the xx.24 bid and offers above the xx.25 offer. Aggregate resting size in the book expands the further the bids and offers rest below and above the prevailing market price. All market participants that have trading terminals can see the order book five prices up and down.

A market participant, having this information⁸ indicated to its FCM that it wanted to execute a block sell order having notional value of \$5 million.⁹ Further assume that this market venue permits market participants to enter undisclosed reserves¹⁰ into the order book. Prior to executing the block order, the order book looks like the following:

⁸ It is not relevant whether the market participant could see the order book on its own trading terminal or whether its carrying broker provided this price/quantity information.

⁹ Assume that a \$5 million single order otherwise exceeds any minimum order size for a block order for that product / venue.

¹⁰ The Market Access Subcommittee provides no opinion with respect to the potential public costs and benefits of permitting market participants to enter undisclosed reserves into the order book of an organized market operating in an electric venue. The members of the subcommittee believed that the example needed the robustness of undisclosed reserve balances in order to communicate the subcommittee's premise that trade matching algorithms should give the highest time/price priority to orders that provide price discovery and transparency. Undisclosed reserve balances provide none, and therefore should be subordinate to disclosed bids and offers when block trades are being executed.

Order Book

xx.29 {not relevant to this example}
xx.28 {not relevant to this example}
xx.27 {not relevant to this example}
xx.26 aggregate offers (4) of \$34,000 [undisclosed aggregate reserves (3) of \$66,000]
xx.25 aggregate offers (3) of \$23,000 [undisclosed aggregate reserves (2) of \$50,000]
xx.24 aggregate bids (2) of \$43,000 [undisclosed aggregate reserves (1) of \$50,000]
xx.23 aggregate bids (3) of \$65,000 [undisclosed aggregate reserves (2) of \$150,000]
xx.22 aggregate bids (5) of \$111,000 [undisclosed aggregate reserves (3) of \$250,000]
xx.21 aggregate bids (7) of \$167,000 [undisclosed aggregate reserves (4) of \$400,000]
xx.20 aggregate bids (9) of \$222,000 [undisclosed aggregate reserves (6) of \$550,000]
xx.19 aggregate bids (4) of \$300,000 [undisclosed aggregate reserves (2) of \$500,000]¹¹

The FCM indicates that it would be prepared to execute a block trade for all¹² \$5 million at xx.20.

The subcommittee's recommended best practice would require the following steps:

1. The \$43,000 bids (2) at xx.24 get filled at xx.20.
2. The \$65,000 bids (3) at xx.23 get filled at xx.20.
3. The \$111,000 bids (5) at xx.22 get filled at xx.20
4. The \$167,000 bids (7) at xx.21 get filled at xx.20.
5. The \$222,000 bids (9) at xx.20 get filled at xx.20.
6. The \$4,392,000 gets block traded (internalized) with the FCM at xx.20.
7. Trades 1 through 5 would occur on the screen and would be instantly transparent to all market participants that have trading terminals.¹³ It would not, at that time, be apparent whether someone simply "turned" the market with a large order or whether a block trade was involved.¹⁴
8. As soon as practicable, but in any event, not less than 90 seconds later, the FCM must submit the block trade to the market venue for retransmission (without any delay) through its trade reporting system. At a minimum, the transmission must contain at least three elements; the price of xx.20, the quantity of \$4,392,000 and the time at which the block trade was executed.^{15,16} The market venue must promptly disseminate the blocked trade information over its quotation system.

¹¹ Technically, the xx.19 bids would not have been displayed when the market was xx.24 bid / xx.25 offered as our mythical venue displays bids and offers 5 prices up and down.

¹² In our example, however, the actual quantity of the FCM's block trade (the residual) is \$4,392,000.

¹³ Even for market participants that might otherwise only have rudimentary quotation devices (rather than trading terminals) the executions opposite the resting bids at xx.24, xx.23, xx.22, xx.21 and xx.20 would be displayed in rapid succession, providing reasonable transparency that some form of large sell order was just executed.

¹⁴ If the venue had a policy of allowing market and limit orders to take out undisclosed reserve balances, (in this example) those market participants that had undisclosed reserve balances to buy (at relevant prices) would likely have the first opportunity to realize that the market went through the limit price of their hidden reserve balances. That being so, those market participants could logically deduce that the order that took out the resting displayed bids but not the undisclosed reserve balances must have been a block trade.

¹⁵ From the subcommittee's perspective, the time at which the (9) resting bids at xx.20 were taken out would arguably be the proper start time to report the residual of the block trade. The residual trade should be reported as soon as practicable and in no event later than 90 seconds later.

Time priority for undisclosed reserves

Assume that after this phenomenon is observed on the screen, the market begins to regroup at xx.19 bid and xx.20 offered. The following procedures constitute the subcommittee's best practice for handling the undisclosed reserve balances that were associated with the various bids at xx.24 through xx.20.

1. If the bidder at xx.24 that had an undisclosed reserve of \$50,000 wishes to enter a fully disclosed bid for that quantity (\$50,000) or any lesser amount at xx.19, its time/price priority should be subordinate only to the (4) prior resting disclosed bids for an aggregate amount of \$300,000.
2. If the bidder at xx.24 that had an undisclosed reserve of \$50,000 wishes to transport its undisclosed bid for that quantity or any lesser amount at xx.19, the time/price priority for its undisclosed reserve balance should be subordinate only to the (4) prior resting disclosed bids for an aggregate amount of \$300,000 and the (2) resting undisclosed reserve balances that aggregate \$500,000.
3. All other undisclosed reserve balances at xx.23, xx.22, and xx.21 should, as groups have new time/price priority in descending limit price order¹⁷ and within limit price, should maintain whatever time/price priority (relative to each other) they had prior to the execution of the block trade.

Prompt trade reporting

The firm internalizing the blocked trade has the affirmative responsibility to report the price and quantity (but no information respecting the identity of the client) as soon as practicable, and in no event, later than 90 seconds after the terms of the trade are finalized.¹⁸ The subcommittee makes no recommendation respecting the medium over which this trade is reported. All organized markets should achieve and maintain the highest level of price transparency to its market participants, upon whose order flow the market venue is completely dependent.

¹⁶ If the market venue typically reports opposite clearing firm information on matched trades then the FCM executing the block buy trade would receive matched trade confirmation from the order book that it was both the buying and selling FCM. If FCM identity information is not otherwise distributed to uninvolved third parties (anyone else with a trading terminal) on all other matched trades, it should not be disclosed for blocked trades. That is, the provision (or not) of opposite FCM information should be no different for blocked trades than for any other matched trades.

¹⁷ Conversely, a block buy order would give priority to the lowest offers firstly.

¹⁸ The subcommittee is aware that the current practices of firms that routinely internalize order flow is reasonably disparate. Therefore, some standardization for the reporting of block trades will likely be required for all affected firms to be able to comply with the 90 second requirement. A survey of current procedures among affected firms would seem appropriate.

Best practice in multiple market venues for economically equivalent products

Were multiple market venues to concurrently serve as bona fide price discovery centers, FCMs have an affirmative responsibility to use their best efforts to direct a customer's orders to the market venue that provides the most favorable terms for the execution of that customer's order (i.e., price, liquidity, cost, speed of execution, etc.). This responsibility lies with the FCM, not the organized market operating an electronic marketplace. The subcommittee agreed that this process would be extraordinarily difficult to automate (or achieve in any unautomated structure) across multiple electronic trading venues, absent either mandatory or privately negotiated linkages of market centers.

III. Transparency

Pre-trade execution

Electronic markets function efficiently when market participants have the opportunity to use transparent market information to make trading and investment decisions, enter orders to do so, and achieve predictable results.

Recommendation III A: Organized markets operating electronic venues should display the order book for all products to all market participants without any preference to any market participant or class of market participant. If only a portion of the order book is displayed, that portion that is disseminated must be disseminated uniformly, and be made available to all classes of market participants without discrimination. Informational content and timeliness of transmission should not be discriminatory among classes of market participants.

If the relevant organized market charges quotation fees, such fees may differ among classes of market participants.

Post-trade execution

Perhaps the greatest public benefit of all organized markets, including organized markets operating in electronic venues is the dissemination of market prices. Organized markets focus attention, centrally. All market participants that have an economic interest in a particular product/venue can express their market view and the *composite* of all of those views determines a product's instantaneous fair market value. All interested market participants must have equal access to this valuable information.

Recommendation III B: Organized markets operating electronic venues should not disseminate price or price and quantity information with any preference to any market participant or class of market participant. Neither the timeliness of dissemination nor

informational content may differ among market participants or classes of market participants willing to pay the same fees to receive the same information at the same time.

The subcommittee does not take issue with the practice of some organized markets that sell their real-time quotation data for a premium price and a delayed quotation feed at a lesser price, nor the practice of charging different fees to provide quotation services to different classes of market participants. The subcommittee would, however, take issue if an organized market were to decline to provide appropriate quotation data, content and transmission speed, *at all*, to a market participant or class of market participant (that were otherwise willing to pay appropriate fees to subscribe to such quotation service).

IV. Marketmakers

The subcommittee defines "marketmakers" as incented liquidity providers that operate or are allowed under a structure administered by an organized market operating an electronic venue. Often, marketmakers are granted market access concessions that are provided to no other market participants or class of market participants in return for providing some minimum market presence, particularly for nascent products which may involve a commitment to make continuous 2-way markets with a minimum size, or to make markets in times of stress.

Some organized markets currently provide incentives to marketmakers by providing financial incentives and/or informational advantages, including: superior speed of trade transmission, reduced fees, and guaranteeing the marketmaker some portion of the order flow. Where marketmaker structures continue to be appropriate, organized markets should have the flexibility to offer a broad range of incentives to marketmakers. The majority of subcommittee members, however, felt that financial incentives alone, should be sufficient under most circumstances.

Marketmaker structures provide a public good by maintaining some defined minimum level of market liquidity (presumably when no one else is willing to do so) and often contribute to maintaining "orderly" markets. The public is not, however, well served when marketmaker structures are not dismantled when market liquidity has been established. There may be circumstances where market liquidity is particularly slow to develop; therefore, some appropriate criterion of market liquidity, rather than the passage of time (exclusively) should determine an appropriate frequency with which the continued presence of marketmaker structures should be reviewed.

Recommendation IV A: An organized market operating an electronic venue should not operate any order processing system, pass any rule or allow any order processing conventions that would otherwise preclude any market participant or class of market participant from entering simultaneous 2-way quotes.

Competition among market participants creates public benefits. To the degree that a marketmaker begins to be exposed to legitimate competition from other non-

marketmaker market participants, its continued presence and associated public costs should automatically cause the relevant organized market(s) to reassess the appropriateness of continuing the marketmaker program for that product. In all cases, organized markets should ensure that market participants have access to a description of the types of "time and place," informational, and/or financial advantages that marketmakers have been granted, (by product or product type, should marketmaker advantages differ by product type).

Recommendation IV B: An organized market operating an electronic venue should not, other than under unusually illiquid circumstances, provide privileged market access to marketmakers by violating the time/price paradigm within the order book. Under no circumstances should any class of market participant's orders be allowed to violate the time/price paradigm, other than orders of marketmakers.

It is suggested that fee¹⁹ or other monetary incentives alone, should provide adequate incentive to attract sufficient liquidity provider(s) with far less public costs than violating the time/price paradigm.

Recommendation IV C: The presence and continued rationale of marketmaker structures (by product) must be reviewed with a frequency that automatically increases as market liquidity in the relevant product increases. The onus should be on the organized market to again justify the continued presence of informationally privileged marketmaker structures based on economic and illiquidity factors.

Any appropriate analysis of marketmaker structures should reflect the same public policy issues that were addressed when the government established the regulatory structures that place limiting parameters on patents and copyrights. National authorities, pursuant to the oversight responsibilities delegated to them, should not permit marketmaking structures to degenerate into perpetuities, ostensibly levying a permanent parasitic tariff on order flow. As liquidity develops with predictable consistency, marketmaker programs must be reevaluated to ensure that the public costs (marketmaker benefits) directly or indirectly through fee incentives incurred are appropriately proportionate to the public benefits received by investors when the marketmaker program was inaugurated.

Recommendation IV D: Marketmakers serve a beneficial purpose to generate liquidity in markets where liquidity has not otherwise occurred naturally. Market makers, in turn, should be allowed to earn a not unreasonable, risk adjusted return for their services. A market structure that requires marketmakers be "held" for no more than a "one lot" or other veritably meaningless quantity should be allowed to earn a concomitantly de minimus risk adjusted return on capital.

¹⁹ Reference is made to recommendation III A and to Section I, *Transparency*. Organized markets could offer reduced quotation fees to market makers, including a reduced fee structure for bandwidth usage. It is reasonable to assume that a marketmaker in an all-electronic venue could incur significant bandwidth usage fees.

The subcommittee members agreed that bona fide competition among electronic venues (for products that are economic equivalents) will always ameliorate concerns over marketmaker structures continuing in perpetuity.

Recommendation IV E: If marketmaker structures are not dismantled after sufficient liquidity develops, then the quantity for which a marketmaker is held should be consistently proportionate to an appropriate liquidity criterion²⁰ for as long as the marketmaker structure is perpetuated.

First and foremost, the subcommittee is strongly of the opinion that marketmaker structures should be *dismantled* once sufficient liquidity develops within a product/venue. Structures should be put in place for organized markets and marketmakers to otherwise recognize when marketmaker structures are no longer required. One way to provide an automated "liquidity reality check" on a marketmaker structure would be to increase the quantity for which the marketmaker is held (to provide liquidity) in a manner such that it increases linearly as the liquidity in the product increases. At some point, it would become obvious even to the marketmaker, that its services are no longer required. At some point (arguably a point well beyond the [market liquidity] point at which the majority of subcommittee members would have the relevant marketmaker structure dismantled), vintage marketmakers would likely abandon their market preference anyway, rather than be held to a quantity three or four orders of magnitude greater than the quantities for which they were originally held when the marketmaker structure was inaugurated.

Conclusion

The Market Access Subcommittee has completed its analysis of the public policy issues relating to applications of technology to electronic organized markets as such applications affect equitable market access, and submits its interim report to the full Technology Advisory Committee for its review and acceptance. The interim report addresses technology applications prior to trade execution, at trade match and information dissemination after trade match. The subcommittee's guiding principals were equity of market access, the considerable value of market transparency, absolute parity among all market participants and balancing the public costs of privileged market access against the expected public benefits.

The end product is a compilation of recommendations and best practices for organized markets. While it is understood that the instant relevance of the subcommittee's interim report is to the CFTC, specific references to the Commission have been intentionally minimized in the interim report to maximize the potential transportability of these best practices to organized markets subject to the supervisory oversight of other national authorities.

²⁰ Indicative criteria might be volume, average trade size, frequency of quotations (other than by the marketmaker) open interest, incidents of block trades, etc.

The members of the subcommittee wish to join the chair in acknowledging the contributions of our industry advisors, Blair Hull and Bill Miller, and thank them for sharing their insights and perspectives on these important issues.

It is our collective desire that the work of the subcommittee be allowed to continue, providing the time and resources to examine similar market access issues germane to automated market venues.

Attachment I

TECHNOLOGY ADVISORY COMMITTEE MEMBERS

Matthew Andresen

President
The Island ECN, Inc.

David Battan

Vice President and General Counsel
Interactive Brokers LLC

Peter F. Borish

President
Computer Trading Corporation

George Crapple

Co-Chairman and Co-Chief Executive Officer
The Millburn Corporation

Daniel Cunningham

Partner
Allen & Overy

John P. Davidson III

Managing Director
Morgan Stanley Dean Witter & Co., Inc.

Yvonne J. Downs

Senior Vice President of Compliance
National Futures Association

Bryan T. Durkin

Senior Vice President and Administrator
Office of Investigations and Audits and Order Routing
Chicago Board of Trade

Robert Fitzsimmons

President and Chief Operating Officer
Nasdaq Liffe Markets

Richard Friesen

Chairman and Founder
ePIT

Jim Heinz
Managing Partner
Marquette Partners LP

Audrey Hirschfeld
Senior Vice President and General Counsel
New York Board of Trade

Kent Horsager
President and Chief Executive Officer
Minneapolis Grain Exchange

Philip McBride Johnson
Head of Exchange-Traded Derivatives
Skadden, Arps, Slate, Meagher & Flom LLP

Scott Johnston
Managing Director and Chief Information Officer
Chicago Mercantile Exchange

Anthony Leitner
Managing Director and General Counsel for Equities
Goldman Sachs

John W. McPartland
Capital Markets Advisor to the
Federal Reserve Bank of Chicago and the
Center for Law and Financial Markets

Hank Mlynarski
President
BrokerTec Futures Exchange LLC
BrokerTec Clearing Company LLC

Laurence Mollner
Managing Member
Mariah Trading Company LLC

Brett Paulson
Senior Vice President and Chief Information Officer
Board of Trade Clearing Corporation

Robert R. Petersen
President and Chief Executive Officer
Kansas City Board of Trade

Kenneth M. Raisler

Partner
Sullivan & Cromwell

Edward J. Rosen

Partner
Cleary Gottlieb, Steen & Hamilton

Tom Thornton

Managing Partner
divine interVentures, Inc.

Neal Wolkoff

Executive Vice President
New York Mercantile Exchange

Attachment II

MARKET ACCESS SUBCOMMITTEE MEMBERS, AND INDUSTRY ADVISORS

MEMBERS

David Battan

Vice President and General Counsel
Interactive Brokers LLC

Chris Concannon

Vice President of Business Development
The Island ECN, Inc.

Jim Heinz

Managing Partner
Marquette Partners LP

Scott Johnston

Managing Director and Chief Information Officer
Chicago Mercantile Exchange

Anthony Leitner

Managing Director and General Counsel for Equities
Goldman Sachs

John W. McPartland (Chair)

Capital Markets Advisor to the
Federal Reserve Bank of Chicago and the
Center for Law and Financial Markets

INDUSTRY ADVISORS

Blair Hull

Matlock Capital LLC, and
Founder of Hull Trading Company

William Miller

Independent Risk Oversight Officer, Commonfund Group, and
Chairman, End Users of Derivatives Council