International Securities Exchange

Guide for Market Makers

Introduction

The fully electronic options market being implemented at the International Securities Exchange ("ISE") provides market makers with many benefits including:

- Displayed size available for immediate execution by customer orders
- Fast execution times
- An open interface to allow the connection of quoting and risk management systems

The ISE market offers several unique features that improve communications between market makers and an Electronic Access Member ("EAM"), including:

- Block Order Mechanism, allowing market makers to anonymously provide additional liquidity to large-size orders
- Facilitation Mechanism, providing market makers with an opportunity to anonymously participate in the execution of large-size customer orders that an EAM seeks to execute as principal

The ISE has available for market makers a user-friendly workstation known as Torque, which provides:

- A market information display to view the ISE best bid and offer ("ISE BBO") with size
- Point and click execution capability
- Options pricing models to calculate theoretical values in real time and maintain quotes in the market
- A "smile" function which allows traders to graphically view and adjust volatilities (see Figure 1)
- Ancillary functions to support market maker responsibilities
- Flexibility in customizing the workstation

The ISE plans to list and trade 600 stock options, which are divided into ten groups of approximately 60 stock options each. One primary and up to ten competitive market makers provide liquidity to each group.

The ISE, with assistance from the market makers, has allocated stock options across the ten groups to assure that initially, each group is balanced in terms of volume, volatility, industry and country concentration.

Each trader in a market maker firm is required to pass a Designated Trading Representative ("DTR") exam. The ISE provides system training and all necessary manuals.

Membership

There are three types of ISE members:

- Primary Market Maker ("PMM") – Similar to specialists (DPMs or LMMs), PMMs are market makers with significant responsibilities, including overseeing the opening, providing continuous quotations in all of their assigned stock options, and ensuring that customer orders are not automatically executed at prices inferior to those available at other options exchanges.

  One PMM is assigned to each of the ten groups of options traded on the Exchange. In addition to maintaining quotations in their assigned stock options, PMMs may conduct a limited amount of trading (up to 10% of their quarterly contract volume) in other options traded on the Exchange.

  A PMM must purchase or lease a PMM membership, entitling the member to act as a PMM in one group of stock options. PMMs are not permitted to represent agency orders.

- Competitive Market Maker ("CMM") – CMMs are market makers who quote independently and add depth and liquidity to the market. Each is required to provide continuous quotations in no less than 60% of the stock options in their assigned group.

  There are up to ten CMMs appointed to each of the ten groups of options traded on the Exchange. In addition to providing quotations in their assigned stock options, CMMs may also conduct a limited amount of trading (up to 25% of their quarterly contract volume) in other options traded on the Exchange.

  A CMM must purchase or lease a CMM membership, and each membership entitles the member to enter quotations in one group of options. CMMs are not permitted to represent agency orders.

- Electronic Access Member ("EAM") – EAMs are broker/dealers that represent agency and proprietary orders on the Exchange. EAMs cannot enter quotations or otherwise engage in market making activities on the ISE.

The ISE market is an auction market, as opposed to a dealer market where market makers act as both broker and dealer. Nevertheless, broker/dealer firms can be EAMs, as well as PMMs and/or CMMs on the ISE, as long as the EAM function is performed independently from the market maker function. In addition, a firm can participate as a market maker in several groups of options by purchasing or leasing multiple memberships. A member may not be both a PMM and CMM in the same group of options.

To participate in the ISE market as a market maker, your organization must become a member of the ISE. In addition, an ISE membership must be purchased or leased from Adirondack Trading Partners or any other owner of an ISE membership. Each member must also enter into an Access Agreement for connection to the market and all trading services.

Contact Adirondack Trading Partners to obtain information regarding the purchase or lease of a PMM or CMM membership, or for general information, contact the ISE Member Services team. Details are at the back of this guide.

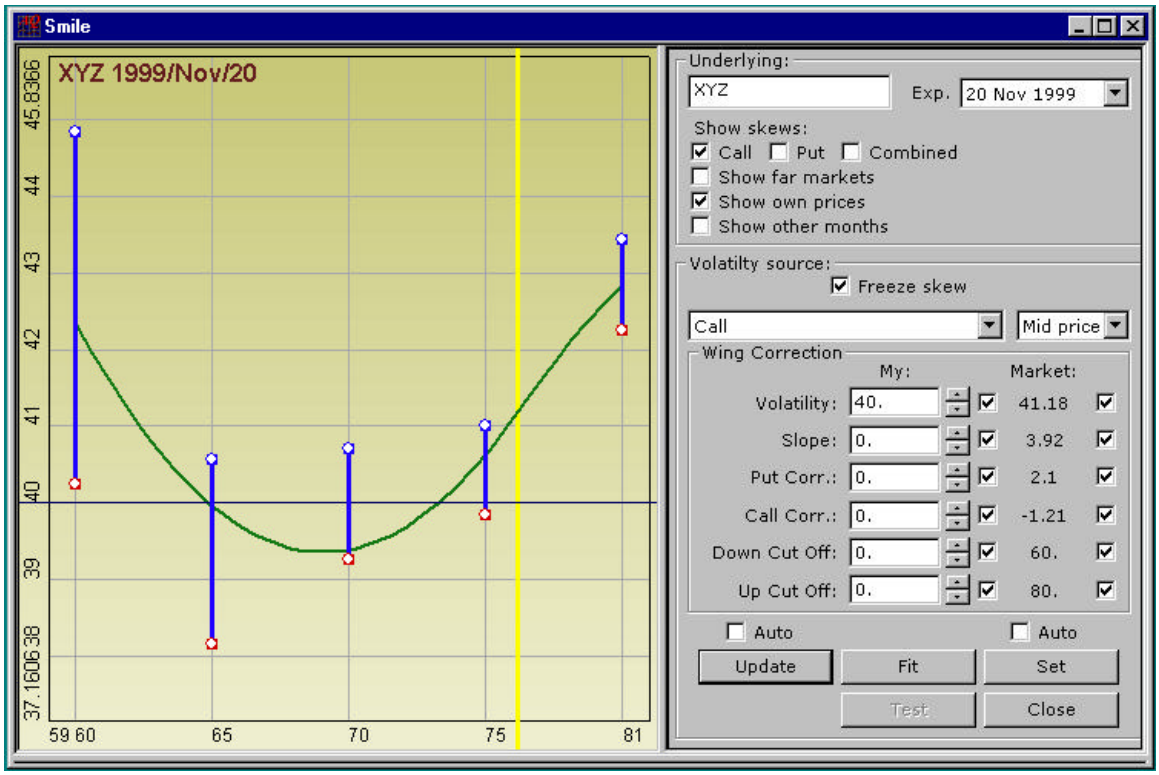
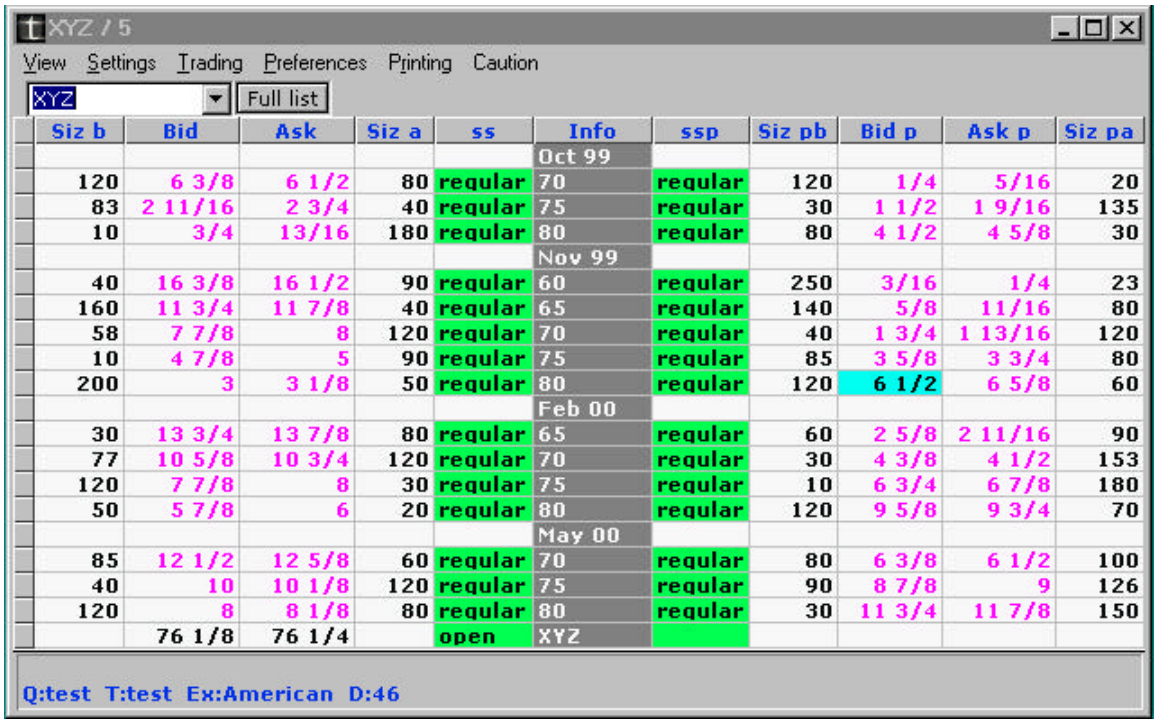


Figure 1. The Torque "smile" function



Siz b	Bid	Ask	Siz a	ss	Info	ssp	Siz pb	Bid p	Ask p	Siz pa
					Oct 99					
120	6 3/8	6 1/2	80	regular	70	regular	120	1/4	5/16	20
83	2 11/16	2 3/4	40	regular	75	regular	30	1 1/2	1 9/16	135
10	3/4	13/16	180	regular	80	regular	80	4 1/2	4 5/8	30
					Nov 99					
40	16 3/8	16 1/2	90	regular	60	regular	250	3/16	1/4	23
160	11 3/4	11 7/8	40	regular	65	regular	140	5/8	11/16	80
58	7 7/8	8	120	regular	70	regular	40	1 3/4	1 13/16	120
10	4 7/8	5	90	regular	75	regular	85	3 5/8	3 3/4	80
200	3	3 1/8	50	regular	80	regular	120	6 1/2	6 5/8	60
					Feb 00					
30	13 3/4	13 7/8	80	regular	65	regular	60	2 5/8	2 11/16	90
77	10 5/8	10 3/4	120	regular	70	regular	30	4 3/8	4 1/2	153
120	7 7/8	8	30	regular	75	regular	10	6 3/4	6 7/8	180
50	5 7/8	6	20	regular	80	regular	120	9 5/8	9 3/4	70
					May 00					
85	12 1/2	12 5/8	60	regular	70	regular	80	6 3/8	6 1/2	100
40	10	10 1/8	120	regular	75	regular	90	8 7/8	9	126
120	8	8 1/8	80	regular	80	regular	30	11 3/4	11 7/8	150
	76 1/8	76 1/4		open	XYZ					

Figure 2. The Torque trading window, showing calls (left side) and puts (right side) with the corresponding size available at the quote

TRADING FEATURES

The ISE provides market makers with tools necessary to effectively quote and communicate with market participants. The following pages describe features available to market makers.

➢ *Central Orderbook*

The ISE maintains a central orderbook for each listed series into which orders and quotations are entered. Quotes and limit orders are entered with quantity and price, and will be stored in the central orderbook in price priority. Within price priority, customer orders are stored in time priority. All customer orders have priority over market maker quotes and non-customer orders at the same price, regardless of their time of entry.

The ISE BBO, including the consolidated size of the ISE BBO, is continually broadcast to all ISE members for display on their workstations (see Figure 2). The ISE BBO is determined by the highest bid and the lowest offer available in each series. This is true whether the bid or offer is a market maker quote, or an agency or proprietary order.

Orders entered by EAMs must specify the source of an order as:

- Customer – Anyone that is not a registered broker/dealer
- Professional – The EAM or another registered broker/dealer other than an options market maker from another exchange
- Away Market Maker – An options market maker from another exchange

The ISE BBO is firm for customer orders.

➢ *Anonymity*

The ISE offers completely anonymous trading. Members that enter orders or quotes are identified in the ISE system, but this information is not visible to any ISE participants. Even the PMM, who can view the full orderbook, is not given member identity information. When executions occur, the parties involved in the execution are informed that they have traded; however, they are not advised of the identity of the counter-party.

➢ *Quote Entry*

The ISE lists all series in each class of options. PMMs are required to maintain continuous quotes in all series for each of the stock options in their assigned group; CMMs are required to maintain continuous quotations in all of the series for at least 60% of the stock options in their assigned group. Each CMM may choose the stock options in which to quote; however, quotations must be entered for all series within those stock options. Once 60% of stock options in the assigned group have been quoted, the CMM may then quote remaining stock options in selective expiration months. When a CMM executes a trade or commences to quote in an individual series, it must continue to quote in all series of that expiration month (calls and puts) for the remainder of the day. During an expiration month, if a CMM executes a trade or commences to quote in an individual series in the expiration month, it must continue to quote in all series of that expiration month until expiration.

The ISE makes available to market makers the Torque workstation, which can be used to enter and maintain quotes. Torque contains pricing models into which a market maker enters volatility, interest rate and dividend information. Torque calculates and sends quotes into the market and recalculates quotes automatically as the underlying equity price moves.

Market makers may enter orders and quotes, but may only enter quotes in stock options within their assigned group. Quotes appear in the orderbook in a manner similar to orders; however, unlike an order, when a quote is entered, it automatically replaces an existing quote in the system from the same market maker. For optimum performance, quotes can be sent to the central exchange system using a mass quote message containing multiple bids and offers.

Market makers may specify in advance certain parameters that instruct the central system as to how specific situations are to be processed:

- Size for Non-customers – Market makers can specify the portion of the displayed size of a quote that they are willing to trade with other non-customers. Under the ISE's rules, the displayed size of a quote is required to be firm only for customers. For competitive reasons, each market maker may choose to be firm for all participants.
- Tick Next Level – When the size of a quote is exhausted, it is automatically updated according to the market maker's parameters. Separate sizes may be entered for each of eight ticks away from the original quote. The central exchange system continues to use these parameters to maintain a market maker's quote until the market maker enters a new quote.
- Step Up Buffer – The ISE BBO always has a minimum size (ten contracts) available for customers. When the aggregate quantity at the ISE BBO is less than the minimum number of contracts, each market maker at the ISE BBO is required to either increase the size of its quote or move its quote to another price level. To assist market makers in maintaining their quotes, an additional quantity may be specified that will automatically be used to increase their quote to the minimum size.

Exchange rules specify maximum quotation spreads, which are uniform for all exchanges. There are times (e.g., when a quote is traded) when the system automatically updates a quote such that the spread between a market maker's bid and offer exceeds the maximum allowable spread. Market makers are then obliged to update their quotes so that the spread is within the limit.

➢ *Order Entry*

Market makers may enter orders as well as quotes. When entering orders, the type of order must be specified as follows:

- Limit Orders – Limit orders trade to the limit price, and any unexecuted portion is stored in the orderbook. Limit orders can be good-until-cancelled, in which case the order will remain in the book until executed or expired, or day orders, in which case any unexecuted amount at the end of the day is cancelled.
- Immediate or Cancel ("IOC") Limit Orders – IOC refers to a limit order that is to be executed immediately. Any portion of an IOC order that cannot be executed immediately is cancelled.

Market makers must use quotations rather than limit orders to indicate the prices at which they are willing to trade options in their assigned group, and therefore may not enter limit orders in these options. In its assigned group, a market maker may execute against orders and quotes by

entering IOC orders or adjusting its quotes. In options outside its assigned group, a market maker may enter limit orders or IOC limit orders.

Market makers and other non-customers cannot enter Fill or Kill ("FOK") or market orders. Marketable limit orders entered by market makers and other non-customers will be rejected if they cannot be executed within two ticks of the ISE BBO; for example, if the ISE best bid is $7, a market maker or other non-customer sell order will be rejected if it would trade at a price lower than $6¾. To maintain a market that is firm to customers for at least ten contracts, the central exchange system will not store a non-customer limit order for fewer than ten contracts. If such order would cause the size of the ISE BBO to be fewer than ten contracts, the order is cancelled.

➢ *Trade Sharing Rules*

The ISE rewards market makers for quoting in size through the allocation of trades based upon the size of their quotation. When an order is executed, the system executes the order against those orders and quotes at the ISE BBO using the following methodology:

- Customer orders are executed in time priority
- When an order is executed at multiple price levels, quotes are given priority at the current price level for the number of contracts executed at the previous price level
- When the original order size is for five contracts or less, they are executed against the PMM (after customer orders are traded), if it is quoting at the ISE BBO with sufficient size to execute the entire order
- For orders greater than five contracts, where the PMM is quoting at the ISE BBO with sufficient size, the PMM receives a priority allocation as follows: at least sixty percent of an order if there is one other non-customer, forty percent if there are two other non-customers, and thirty percent if there are three or more non-customers at the ISE BBO. These guarantees are minimums, so that if the PMM's pro-rata share of the size available at the ISE BBO is greater than these minimums, the PMM receives its pro-rata share
- CMM quotes and non-customer orders are handled in size priority and receive an allocation based upon the ratio of their order/quote size in proportion to the size of the remaining orders/quotes at the ISE BBO

Trading Example

This example demonstrates how a market order would trade against the orderbook in a situation where there is a mixture of orders and quotes. Only the buy side of the orderbook is shown.

CMM1 through CMM3 are Competitive Market Maker quotes. PMM is the Primary Market Maker quote. Cust is a customer order, while Firm is a proprietary order.

The orderbook for the buy side contains the following:

Owner	Qty	Price
Cust	5	@ 6½
PMM	15	@ 6½
CMM1	30	@ 6½
Firm	20	@ 6½

CMM3	10	@ 6½
CMM2	10	@ 6½

The system will display the buy side of the ISE BBO as **90 @ 6½.**

An EAM now enters a market order to sell 21 contracts. The system will execute the order as follows:

1. **Execute the customer limit order in orderbook**
   Cust buys 5 @ 6½

2. **PMM to receive share of trade**
   The PMM's pro-rata share would appear to be 15/85 (or 18%); however, the PMM is entitled to a minimum of 30% of the balance (since there are three or more non-customers).
   PMM will receive 16 x 30% = 4.8 (round up to 5)
   PMM buys 5 @ 6½

3. **Share remainder with non-customer orders and quotes**
   The balance of the order, 11 contracts, is then shared among the remaining CMM and non-customer orders, pro-rata, based upon the size of the quotes and orders in the orderbook. Note that these orders and quotes are sorted by volume, and then time of entry. The total quantity available in the orderbook at this price level is now 70 contracts.

   CMM1 will receive 11 x 30/70 = 4.7 (round up to 5)
   CMM1 buys 5 @ 6½

   Firm will receive 6 x 20/40 = 3
   Firm buys 3 @ 6½

   CMM3 will receive 3 x 10/20 = 1.5 (round up to 2)
   CMM3 buys 2 @ 6½

   CMM2 will receive 1 x 10/10 = 1
   CMM2 buys 1 @ 6½

The EAM that entered the market order is now informed that it **sold 21 @ 6½**.

Note: Even though CMM3 and CMM2 are quoting equal size, CMM3 has priority over CMM2 based upon its time of entry.

The final orderbook will then appear as follows:

Owner	**Qty**	**Price**
PMM	10	@ 6½
CMM1	25	@ 6½
Firm	17	@ 6½
CMM2	9	@ 6½

CMM3	8	@ 6½

The buy side of the ISE BBO then displays **69 @ 6½**.
The sell side of the orderbook remains unchanged.

➢ *Away Market Price Protection*

A customer market order or marketable limit order will not be executed automatically against the ISE BBO while another options exchange is disseminating a better price. If a customer order attempts to trade against the ISE BBO while another exchange is displaying a better price, the order is referred to the PMM, who can either match the away market price or attempt to get the better price from the other market for the customer.

Match Away Market Price Parameter – To assist the PMM in processing orders when another options market is displaying a better price, the PMM parameter table allows the PMM to specify the size up to which it will automatically match the away market. The table is flexible, allowing the PMM to specify different sizes that it is willing to execute, depending upon the number of ticks that the away market is better than the PMM's own quote. If the size of a marketable order is more than the PMM is willing to execute automatically according to the parameter table, the order is stored in the central orderbook where it remains available for execution against incoming orders while the PMM addresses the order. If the away market fades, or the ISE market improves, the system will automatically release the order so that it can execute against the ISE BBO. The PMM is notified of the order in a message that appears on the workstation. The PMM can either manually execute the order at the better price or contact the other exchange and attempt to get the better price for the customer order.

A customer can designate that an order should not receive away market price protection when the order is submitted. Customer FOK orders do not receive away market price protection. Non-customer orders do not receive away market price protection and will be automatically executed at the ISE BBO.

➢ *Size Associated With The ISE BBO*

The ISE BBO is displayed with size, which is firm for customer orders. The size at the ISE BBO is always ten or more contracts. When a customer order improves the ISE BBO for less than ten contracts, the PMM either joins the order to make up the difference, or executes the order. This PMM obligation, however, does not apply to non-customer orders, which must therefore be a minimum size of ten contracts if they improve upon the ISE BBO. While the ISE BBO is firm for customer orders, the Exchange maintains the same rule for market maker quotes as the other options markets; accordingly, the displayed size of the ISE BBO may not be fully available for non-customer orders. Each market maker sets in advance the amount of its quotes that are available to non-customer orders. The central exchange system permits the PMM to perform this obligation automatically through a pre-set parameter.

Derived Orders – Based upon parameters preset by the PMM, the central exchange system creates a derived order of sufficient size, which is inserted into the orderbook along with the customer order, so that at least ten contracts are available at the ISE BBO. The PMM enters in a parameter table the maximum size of an order that the system may derive for each tick that the customer order improves upon the PMM's current quote. If more size is required to

make the ISE BBO good for ten contracts than is specified in the table, the central exchange system will automatically execute the customer order against the PMM.

An order derived by the central exchange system for a PMM is only available to customer orders. Derived orders are only created in response to customer orders and may only be executed by customer orders.

➢ *Block Order Mechanism*

The Block Order Mechanism allows an EAM to obtain liquidity from the trading crowd for large-size customer orders (50 or more contracts). The steps involved in a Block Order Mechanism are as follows:

1. **Order Entry** – The EAM enters the block order, with size and limit price. The order must be marked either IOC or FOK. While normally non-customers may not enter FOK orders, it is permitted when using the Block Order Mechanism to indicate an "all or none" interest. The EAM specifies any combination of the buy/sell intention, price, quantity and validity (IOC or FOK) to be disclosed.
2. **Broadcast Message** – An anonymous message is broadcast to the market makers assigned to that options class, as well as other participants with proprietary bids or offers at the ISE BBO in the particular options series (the "crowd"). The message contains only those details of the order that the EAM specified be disclosed.
3. **Responses** – The members of the crowd have a limited amount of time (30 seconds) to respond to the block request with additional trading interest. Members may enter multiple responses, with different prices and sizes, which need not be two sided. The responses are stored by the central system and are not disclosed to any market participants, including the initiating EAM. The EAM may cancel the block order and respondents may cancel and re-enter their block responses during this period.
4. **Execution** - At the end of the response period, if there is sufficient quantity available to meet demand, a trade execution will occur, after which any remaining responses are cancelled. There are two elements to the execution: price and allocation.

   Price – Block orders are executed at a single price. At the end of the response time period, the system will determine the execution price by using the orders in the book and the block responses. If the order is marked FOK, the execution price will be the best price where there is sufficient quantity to execute the entire order. If there is insufficient size to execute the order in full, no execution will occur. If the block order is marked IOC, the execution price will be the best price where there is sufficient quantity to execute the entire order. If there is insufficient size to execute the entire order, the order will be executed at the best available price, up to the limit price. Any unexecuted portion of an IOC order will be cancelled. Due to the larger size of block orders, the execution price can be outside the ISE BBO, in which case better priced bids and offers in the orderbook have priority and are protected by being executed at the block price.

   Allocation – All trading interest (i.e., orders, quotes and responses) at a better price than the block execution price will be executed first, and will receive the better execution price. Customer orders at the execution price will then be executed. Thereafter, responses to the quote request, as well as market maker quotes and non-customer orders in the orderbook at the execution price, share in the execution of the order according to the trade-sharing algorithm.

➢ *Facilitation Mechanism*

An EAM may attempt to execute as principal its own block size customer orders (fifty or more contracts) through the Facilitation Mechanism. The EAM must be willing to be the counter-party for the entire size of the customer order. The Facilitation Mechanism operates in a similar manner to the Block Order Mechanism:

1. **Order Entry** – The EAM enters the facilitation order with size and limit price.
2. **Broadcast Message** – An anonymous message is broadcast to the market makers assigned to that stock option, as well as other participants with proprietary bids or offers in the particular options series at the ISE BBO (the "crowd"). The message contains full details of the order, but does not identify the firm that entered the facilitation order.
3. **Responses** – The members of the crowd have a limited amount of time (30 seconds) to respond to the facilitation request with the size they are willing to trade at the facilitation price. The responses are stored by the central system and are not disclosed to any market participants, including the initiating EAM. The EAM may cancel the facilitation order, and respondents may cancel and re-enter their facilitation responses during this period.
4. **Execution** – At the end of the response period, the execution will occur. There are two elements to the execution: price and allocation.

   Price – Facilitation orders are not always executed at the facilitation price. There is opportunity for the facilitating customer to receive a better price if the electronic trading crowd chooses to insert a quote or order that is better than the facilitation price. If there are any Non-Customer orders or quotes at a better price, the facilitation order will trade at the improved price until all interest is filled. If there is sufficient size within the orderbook to completely satisfy the facilitation order at a better price, the EAM firm will not participate. Members of the crowd may improve the facilitation price by entering a quote or order into the orderbook within 20 seconds of receiving the broadcast.

   Allocation – All trading interest (i.e., orders, quotes and responses) at a better price than the facilitation price will be executed first. Customer orders at the facilitation price will then be executed. Next, the EAM that entered the order will receive forty percent of the original size of the facilitation order or as much as remains if more than sixty percent has already traded. Thereafter, responses to the quote request, as well as market maker quotes and non-customer orders in the orderbook at the facilitation price, share in the execution of the order. If there is any unexecuted balance, the remainder is executed by the initiating EAM.

➢ *Cabinet Orders*

Broker/dealers may enter cabinet orders, which are routed to the PMM for execution. Cabinet orders are used for liquidating deep out-of-the-money option positions for tax management purposes.

Open Interface

The ISE's central exchange system has a proprietary open interface that allows members to develop and connect applications, such as:

- Quoting applications that enter orders and perform all of the functions that are available through the Torque market maker workstation

- Back office systems that obtain trade information directly from the central exchange system

The open interface uses a proprietary Application Programmers Interface ("API") library to send trading commands to the central system and to receive executions and market information from the central system.

Members may develop applications for specific purposes, which can be used in conjunction with the Torque workstation, or use trading products supplied by third party vendors.

Contact Member Services for more information on the API or to obtain a list of independent software vendors that have commercial products that connect to the open interface.

Trading Support

An experienced staff is available to help ISE members resolve any problems or answer questions. The ISE has established the market control group for trading support, a help desk to resolve technical issues and Member Services to provide connectivity and open interface support.

ISE Contacts

Richard Pombonyo, VP Marketing – first point of contact for member firms

(212) 897-0250

Gregory Maynard, VP Member Services – assistance with all aspects of technical connection to the ISE

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For more information, visit our web site at www.iseoptions.com or email us at mail@iseoptions.com.

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