

Exchange Survey Finds Wide Range of Risk Controls in Place

By Leslie Sutphen

As the demand for low latency and more control over sophisticated electronic trading systems increases, traders continue to seek direct access to an exchange trading environment without going through a broker's infrastructure. This has put more pressure on clearing firms, exchanges and regulators to monitor and manage the risks of such trading.

In January 2010 the FIA assembled a working group consisting of derivatives exchanges, clearing firms, and trading firms to develop principles for managing the risks in providing direct access to exchanges in the futures industry. The working group published a comprehensive set of recommendations on market access risk management in April. Subsequently, the FIA conducted a survey of global futures exchanges to determine how widely these principles are being implemented. A total of 24 exchanges have responded to the survey to date. Responding to the survey was voluntary, and not all of the exchanges invited to respond have yet responded.

Four out of five exchanges enable traders to access the exchange directly with the sponsorship of a clearing firm. Many of the exchanges that do not currently enable direct access are planning to enable such access in the future. These results indicate how widespread this method of access is, and highlight the importance of establishing appropriate risk controls.

The survey found a mixed picture in terms of the implementation of risk controls. Although the FIA working group recommended that exchanges provide pre-trade controls at the exchange level to facilitate risk management of direct access clients, only 66% of the exchanges surveyed currently offer such controls at the exchange level. However, an additional 27% of the respondents are planning to add such controls in the future, indicating that most exchanges recognize that these controls are essential if they make direct access available. As far as other recommendations on pre-trade controls, such as kill switches, the exchanges did not generally have such controls in place.

The exchanges did a better job on providing comprehensive post-trade information, but only 65% offer a "drop copy" feed that includes working orders. The majority of exchanges do not yet provide exchange-sponsored co-location facilities—a recommendation by the group to ensure that such facilities are available to all. However, 45% of the respondents indicated that they are planning

such facilities in the future. Most exchanges enable mandatory conformance testing of all trading applications and provide clear error trade policies.

The biggest gaps in the recommendations involve better pre-trade risk controls at the exchange level and the offering of co-location facilities that are available to all. However, the exchanges indicate that they are moving in the direction of providing this in the future.

For complete survey results, go to www.futuresindustry.org/projects-and-studies.asp.

Pre-Trade Risk Controls

When exchanges allow traders to access their markets directly without passing through the risk management systems of their clearing firms, pre-trade risk controls are an essential method of preventing these traders from exceeding appropriate trading levels and from entering unintended orders. Because the clearing firm cannot access the direct access client's trading application to ensure that proper order size limits and posi-

tion limits are in place, the working group recommended that pre-trade controls be set at the exchange level for both orders and positions, that the controls be mandatory to ensure that there are no latency disadvantages, and that the controls be set by the clearing firm. The majority of exchanges responding have policies and tools in place that comply with those recommendations.

Fifty-nine percent of all exchanges require some sort of pre-trade risk limits to be in place, with maximum order size limits being the most common requirement. Sixty-eight percent of the exchanges offer some sort of risk controls at the exchange level. The working group recommended that both order size limits and position limits be available at the exchange level. Sixty-eight percent of the exchanges surveyed offer order size limits. Sixty-three percent of the exchanges either offer or plan to offer position limits, and 41% offer or plan to offer margin utilization limits. Sixty-eight percent of the exchanges audit whether the pre-trade controls are being used by traders.

Over 55% of exchanges address the latency issues of adding pre-trade controls by

requiring the controls to be mandatory for everyone, as recommended by the working group. Some exchanges such as ELX and Eurex have sought to reduce latency by performing the pre-trade risk calculation immediately after the order reaches the matching engine, and then blocking further orders once a limit has been breached.

The working group recommended that working orders be included in pre-trade risk calculations to ensure that excessive trading be blocked before it occurred. Sixty-seven percent of exchanges already include working orders in their calculation.

Ninety percent of all exchanges that offer pre-trade risk controls offer an administrative tool to implement such limits. An increasing number of exchanges recognize the need for automating the setting of these limits and 45% offer an API for administrators to upload such limits.

Eighty-one percent of exchanges make the setting of limits mandatory before a product can be traded. Most exchanges enable setting limits at the individual product level and at the trader ID, account, or firm level. Only 10% to 20% of exchanges offer some of the more granular settings recommended

such as product group levels or differentiation between outrights and spreads and between in-the-money and out-of-the-money options.

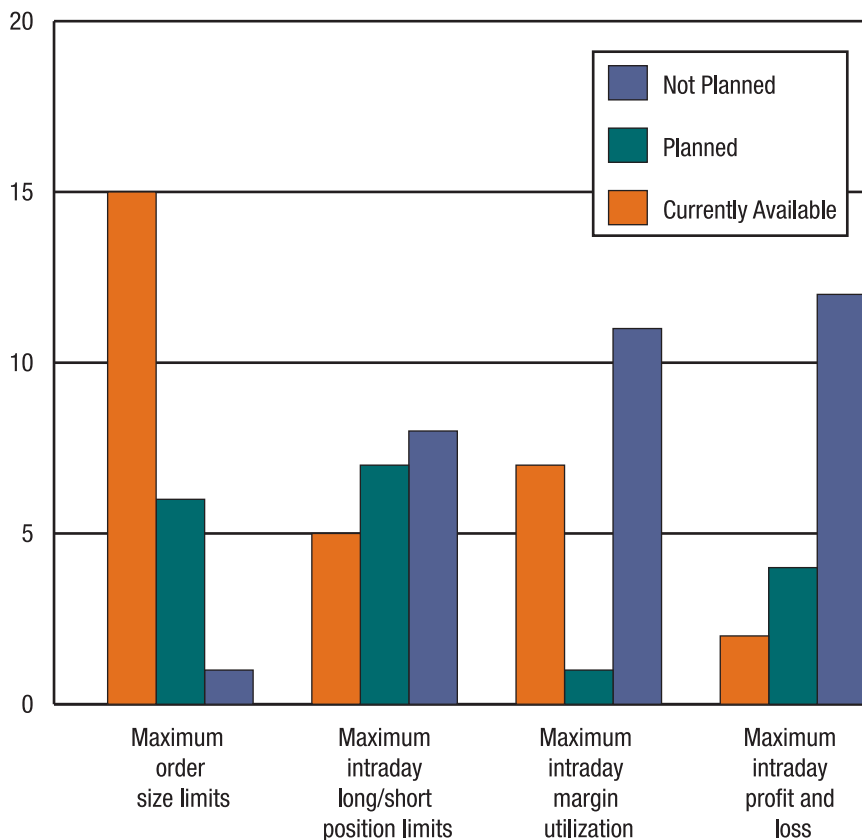
Eighty-nine percent of exchanges make it possible for an administrator to make intraday adjustments to risk limits. Eighty percent of exchanges also comply with the recommendation to have such limits set by the clearing firm and not the trading entity.

Other Pre-Trade Tools

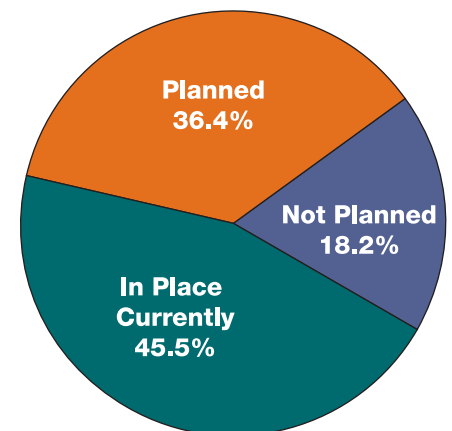
The working group also recommended several other pre-trade controls be set at the exchange level including the capability to cancel all working orders if a trading firm disconnects, the availability of a “kill” switch to cancel all orders on a single command, and the provision of a tool to cancel or monitor individual orders and filled trades. They also recommended that the exchange implement price banding limits—a price range outside of which a limit order is blocked to prevent the placement of an order at a price that would likely be erroneous. Finally, the group recommended that exchanges have clearly delineated error trade policies to ensure certainty of trades.

Seventy-two percent of all exchanges offer or plan to offer a “cancel on disconnect” capability; however, 63% of those exchanges offering it do not make it manda-

Which of the following pre-trade risk controls are available or will be available at the exchange level?



Does the exchange offer a “kill button” or the ability to cancel all working orders and prevent further orders with a single command?



tory. Forty-six percent of the exchanges offer a kill button currently; however, 50% of the exchanges that do not currently have a kill switch are planning to offer it in the near future.

Seventy-seven percent of exchanges offer the ability to cancel working orders independently from a trading connection. Of the exchanges that offer this ability, 57% offer an electronic capability as opposed to requiring an administrator to call the exchange. The order cancellation capability tends to be granular, with ability to view partial fills, cancellations, timestamps, and to cancel more than one order at a time.

Over 80% of the exchanges offer price banding limits. In addition, the price banding limits tend to be fairly sophisticated, differentiated on the specific characteristics of the product and the specific conditions of the market. This widespread practice among futures exchanges speaks well of the industry's ability to prevent order executions at inappropriate prices such as occurred in the equity markets in the "flash crash" of May 6, 2010.

As recommended by the working group, 71% of the exchanges have implemented market maker protection parameters to ensure that market maker resting quotes are cancelled in certain unusual market conditions.

As far as differentiating legitimate trades from wash trades, the exchanges generally have not implemented any automated pre-

trade tools for identifying and preventing wash trades, with only 22% indicating that they have blocking controls in place. Rather, exchanges have worked to carefully identify individual algorithms and traders to be able to identify wash trades on a post trade basis.

Post-Trade Tools

The working group agreed that comprehensive risk management can only be performed based on accurate and immediate post trade information across exchanges. Used in conjunction with good pre-trade controls, immediate post trade analysis can ensure that improper or unintended trading can be controlled. The group recommended that exchanges provide real-time "drop copy" feeds of all working orders to ensure that clearing firms receive an understanding of trading activity and also that trading firms can match actual working orders with those of internal systems. The group also recommended that exchanges provide a real-time feed of matched trades as soon as trades occur for both risk management and position reconciliation.

Three quarters of the exchanges surveyed either offer or plan to offer a "drop copy" feed with detailed information on order acknowledgements, filled orders, and order timestamps and numbers. A similar number of exchanges also offer a real-time, low latency matched trade feed.

Co-Location

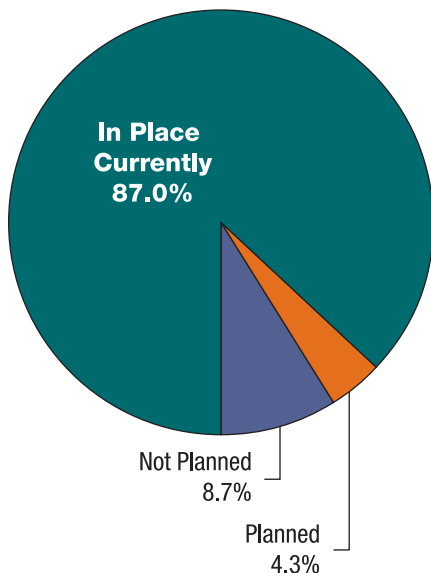
The working group recommended that exchanges take steps to ensure that co-location facilities are available on an equal basis to all those who seek low latency access to the exchange. Without explicit and transparent information on access to the exchange, traders can gain an unfair advantage in seeking trading facilities that are located closer to a matching engine and not necessarily available to others.

Seventy percent of exchanges either offer or plan to offer exchange-sponsored co-location facilities. In addition, 62% of exchanges offer or plan to offer designated third party hosting facilities that are available to all members or firms sponsored by members. In addition, 14% of exchanges currently provide and 52% plan to provide information on the latency of their co-location or proximity solutions.

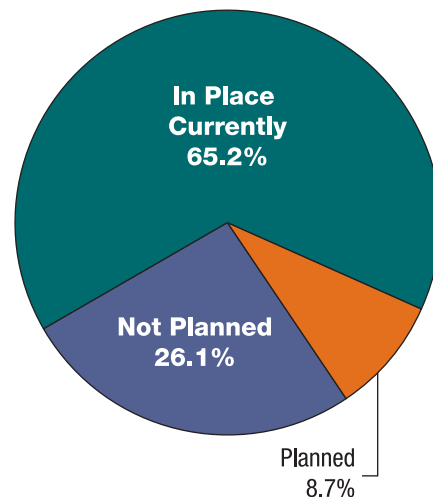
Conformance Testing

As algorithmic and high frequency trading becomes the norm, it becomes important that such trading is thoroughly tested before an automated trading system is allowed to access the exchange. The working group recommended that exchanges require conformance testing of any trading system both when the exchange changes its functionality and when a participant's core functionality has changed.

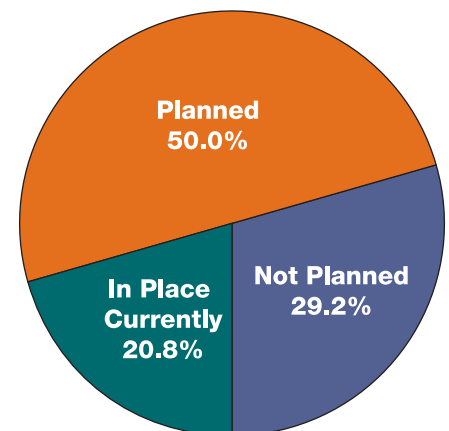
Does the exchange offer price banding or dynamic price limits? (i.e., limits that prevent orders from being entered that are too far off the last price traded.)



Does the exchange provide real-time "drop copy" of working orders available on a separate feed from the trading connection?



Does the exchange sponsor co-location facilities itself?





FIA Survey of Risk Controls at Futures Exchanges An Interactive Webinar 10:00 ET, January 25, 2011

The Futures Industry Association conducted a global survey of futures exchanges in the fall of 2010 to determine what controls they use to manage the risks in providing trading firms with direct market access. Twenty-six exchanges responded to the survey with detailed information about the types of risk controls that they have in place or are planning to implement in the near future. Leslie Sutphen, an expert on electronic trading, will present the survey findings and highlight the areas where further improvements are needed.



Leslie Sutphen

To participate in this webinar, please register online at
<http://www.futuresindustry.org/webinars/>

The group also recommended that exchanges provide a parallel conformance environment that mirrors the actual exchange trading environment and that has high availability.

More than 90% of exchanges currently or plan to require a new trading application to pass a conformance test. Ninety-five percent of exchanges also provide or plan to provide a conformance or certification environment that is widely available for testing. The exchange conformance testing generally covers most trading states including logging on and off, placing and canceling orders, obtaining market data information and recognizing fill information.

Error Trade Policies

The working group believes that it is essential for an exchange to have a robust, explicit error trade policy in place to promote certainty when trades take place. Despite all the safeguards recommended above, it is important that exchanges have policies that enable traders to accurately assess their positions and continue trading in times when markets are disrupted by erroneous trades. The working group recommended that trades be adjusted only when they are outside a certain “no adjust” range and that such trade adjustments take

place within an agreed amount of time after an erroneous trade occurs. Over two-thirds of the exchanges responding reported having such a “no adjust range.”

The working group also recommended that an exchange have a policy in place to compensate those whose contingent orders are erroneously triggered by a trade that was in error. Only 25% of the exchanges offer such compensation at this time.

Seventy-eight percent of exchanges have a pre-defined limit for when error trades are reported, with most exchanges requiring reporting of errors within 30 minutes or less after the trade occurs.

Conclusion

The survey results indicate that there is wide consensus among global derivatives exchanges on the use of pre-trade and other tools for preventing risk from erroneous or disruptive trades. In addition, most exchanges are in the process of adopting other practices such as equal access to co-location, conformance testing, and explicit error trade policies to promote fair and orderly markets. Despite the increase in direct access, high frequency and automated trading, futures exchanges seem to be implementing a wide variety of practices that will

prevent market disruption and high losses from erroneous trades.

There are some key gaps, however, with the working group’s recommendations. First, most exchanges do not offer pre-trade position limits, and if they do offer position limits or margin limits, they are not sufficiently granular to provide meaningful controls. More work is needed to develop robust and comprehensive controls. Second, the working group recommended that exchanges provide fair and open access to co-location facilities. Although most exchanges are moving toward exchange-sponsored co-location facilities, work remains to be done to ensure that this type of access is provided in an equitable and transparent fashion. Finally, although exchanges tend to provide a variety of pre-trade tools such as kill switches and order cancellation, these functions tend to be largely manual and non-standardized across exchanges. More work is needed to provide pre-trade controls that are standardized and easy to automate across exchanges. ■

Leslie Sutphen a director of Financial Markets Consulting, a firm which provides consulting on risk management, trading system best practices, and data management for the listed derivatives industry. Prior to this, she was global head of eSolutions for Newedge Group.

MARKET ACCESS WORKING GROUP SURVEY RESULTS

(CFTC-Regulated DCMs Highlighted in Blue)

Question	ASX 24	CBOE Futures	CME Group	Dubai Mercantile Exchange	ELX	Eurex	Hong Kong Exchanges and Clearing	ICE	Kansas City Board of Trade
RULES FOR OFFERING DIRECT ACCESS									
Direct Access via Clearing Member's System	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Direct Access via Vendor	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Direct Access to Exchange	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Direct Access offered in Future									
Exchange Restrictions for Direct Access Traders									
• Entity Must Be NCM	X	X			X	X	X		
• Clearing Member Must Guaranty	X	X	X	X	X	X	X	x	X
• Trading Environment Hosted in Clearing Member							X		
• Other	X		X	X	X		X		X
PRE-TRADE RISK CONTROLS									
Require Pre-Trade Risk Limits	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Pre-Trade Controls Required									
• Maximum Order Size	X				X		X	X	
• Maximum Intraday Long/Short Position	X							X	
• Maximum Intraday Margin			X	X					X
• Maximum Intraday P/L	X								
• Other	X				X	X	X		
Exchange-Level Pre-Trade Controls									
• Maximum Order Size	In Place		Planned	Planned	In Place	In Place	In Place	In Place	Planned
• Maximum Intraday Long/Short Position	In Place		Planned	Planned	In Place	Not Planned		In Place	Planned
• Maximum Intraday Margin	Not Planned		In Place	In Place	In Place	In Place		Not Planned	In Place
• Maximum Intraday P/L	In Place		Planned	Planned		Not Planned		Not Planned	Planned
• Other									
Level at which Controls Set									
• At Individual Product Level	All Controls				No Controls	Some Controls	Some Controls	All Controls	
• At Product Group Level	No Controls				All Controls	Some Controls	Some Controls	No Controls	
• Differentiated between Outrights and Spreads	No Controls				No Controls	Some Controls	Some Controls	No Controls	
• Differentiated between In-the-Money and Out-of-the-Money for Options	No Controls					No Controls		No Controls	
• Differentiated between Front and Back Months	No Controls				No Controls	No Controls		No Controls	
• Trader/User Level	All Controls				All Controls	Some Controls	Some Controls	All Controls	
• Firm Level	All Controls				All Controls	Some Controls	Some Controls	No Controls	
• Account Level	All Controls		All Controls	All Controls	All Controls	No Controls		All Controls	All Controls
• Other	X					X	X		



LME	MEFF	MexDer	Minneapolis Grain Exchange	Moscow Interbank Currency Exchange	National Stock Exchange of India	NCDEX	NYSE Liffe	NZX	One Chicago	Singapore Exchange	Thailand Futures Exchange	TOCOM	Turkdex
Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	No	Yes	No
No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No
No		No											Yes
				X			X	X					
	X	X	X	X	X	X	X	X	X	X		X	
X	X												
			X		X				X	X	X		
No	Yes	No	Yes	Yes	Yes		Yes	No	Yes	No	Yes	Yes	
	X				X		X		X		X	X	
					X		X						
			X										
					X			X	X	X	X		
In Place	In Place	In Place	Planned	Planned	In Place	In Place	Planned	Not Planned	In Place	Planned	In Place	In Place	
Not Planned	Planned	Planned	Planned	Not Planned	In Place	In Place	Planned	Not Planned	Not Planned	Planned		Not Planned	
Not Planned	Not Planned	Not Planned	In Place	In Place	Not Planned	In Place	Not Planned	Not Planned	Not Planned	Planned		Not Planned	
Not Planned	Not Planned	Planned	Planned	Planned	Not Planned	In Place	Not Planned	Not Planned	Not Planned			Not Planned	
				X							In Place		
All Controls	All Controls			Some Controls	Some Controls	All Controls	All Controls			Some Controls	No Controls	All Controls	
	All Controls			No Controls	Some Controls		All Controls			All Controls	All Controls	All Controls	
	No Controls			No Controls	No Controls		All Controls			No Controls	No Controls		
	No Controls			No Controls	No Controls		All Controls			No Controls	No Controls		
	All Controls			No Controls	No Controls		All Controls			No Controls	No Controls		
All Controls	All Controls			Some Controls	No Controls	All Controls	All Controls		X	All Controls	No Controls		
	All Controls			Some Controls	No Controls	All Controls	All Controls			All Controls	No Controls		
	Some Controls		All Controls	Some Controls	No Controls		All Controls			All Controls	No Controls		
X				X							X	X	

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Question	ASX 24	CBOE Futures	CME Group	Dubai Mercantile Exchange	ELX	Eurex	Hong Kong Exchanges and Clearing	ICE	Kansas City Board of Trade
OTHER PRE-TRADE TOOLS									
Automatic Cancellation of Orders on Disconnect	In Place	Not Planned	In Place	In Place	In Place	In Place	In Place	In Place	In Place
Cancel on Disconnect Requirement	Elected		Elected	Elected	Mandatory	Elected	Mandatory	Mandatory	Elected
Offers Kill Button	Planned	In Place	Planned	Planned	In Place	In Place	Not Planned	In Place	Planned
Ability to Cancel Working Orders Independently	In Place	In Place	In Place	In Place	In Place	In Place	Not Planned	In Place	In Place
Order Cancellation Features Provided									
• View Working Orders	X	X	X	X		X			X
• View Intraday Fill Information	X	X	X	X		X			X
• View Cancels and Replaces	X	X	X	X		X			X
• View Order Timestamps	X	X	X	X		X			X
• Cancel Individual Orders	X	X	X	X		X			X
• Cancel Groups of Orders	X	X	X	X		X			X
• Cancel All Working Orders at Once		X	X	X	X	X	X		X
• Other					X				
Price Banding or Dynamic Price Limits	In Place	Not Planned	In Place	In Place	In Place	In Place	In Place	In Place	In Place
Market Maker Protection Parameter Capability	No	Yes	Yes	Yes		Yes		Yes	Yes
Block of Wash Trades	Not Planned	Not Planned	Not Planned	Not Planned	In Place	In Place	Not Planned	In Place	Not Planned
FACILITATION OF POST-TRADE CHECKS									
Provision of "Drop Copy" Feed	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place
Provision of Real-Time Net Position by Product by Maturity after Matching	In Place	Not Planned	In Place	In Place	Not Planned	In Place	In Place	In Place	In Place
How Long until Data delivery	10 Minute Delay		Seconds	Seconds			Real-time	Real-time	Seconds
CO-LOCATION POLICIES									
Sponsored Co-Location	Planned	In Place	Planned	Planned	Not Planned	Not Planned	Planned	In Place	Planned
Co-Location Designated to Third-Party Proximity Hosting	Not Planned	Not Planned	In Place	In Place	In Place	In Place	Not Planned	Not Planned	In Place
Publication of Latency Statistics	Not Planned	Not Planned	Planned	Planned	Planned	In Place	Planned	Planned	Planned
CONFORMANCE/CERTIFICATION/TESTING									
New Trading Application Must Pass Conformance Test	In Place	In Place	In Place	In Place	In Place	Not Planned	In Place	In Place	In Place
Test Environment Provided	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place
Conditions for Recertification of Application									
• Exchange Core Functionality Change	X	X	X	X	X		X	X	X
• Participants Core Functionality Change	X		X	X	X		X		X
• Other			X	X	X				X
ERROR TRADE POLICY									
No Adjust Range Policy	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place
Policy to Force Compensation from Those Responsible for Error	No	No	Yes	Yes	Yes	No	No	No	Yes



LME	MEFF	MexDer	Minneapolis Grain Exchange	Moscow Interbank Currency Exchange	National Stock Exchange of India	NCDEX	NYSE Liffe	NZX	One Chicago	Singapore Exchange	Thailand Futures Exchange	TOCOM	Turkdex
In Place	In Place	In Place	In Place	Planned	Not Planned	Not Planned	In Place	Not Planned	Not Planned	In Place	In Place	Not Planned	
Mandatory	Elected	Elected	Elected	Elected			Mandatory			Elected	Mandatory		
In Place	Planned	Not Planned	Planned	Planned	In Place	In Place	Planned	Not Planned	In Place	Planned	Not Planned	In Place	
In Place	In Place	Planned	In Place	In Place	Not Planned	In Place	In Place	In Place	Not Planned	In Place	Not Planned	In Place	
X	X	X	X	X	X	X	X	X		X		X	
X	X	X	X	X	X	X	X	X		X		X	
	X	X	X	X		X	X	X		X		X	
X	X		X	X	X	X	X	X		X		X	
X	X	X	X	X	X	X	X	X		X		X	
X	X	X	X	X	X	X	X	X		X		X	
X	X	X	X	X	X	X	X	X				X	
								X					
In Place	In Place	Planned	In Place	In Place	In Place	In Place	In Place	In Place	Not Planned	In Place	In Place	In Place	
	Planned		Yes	No	No		Yes	Yes	No	Yes			
Not Planned	Not Planned	In Place	Not Planned	In Place	Not Planned	Not Planned	In Place	Not Planned	Not Planned	No	Planned	Not Planned	
Not Planned	In Place	Not Planned	In Place		In Place	In Place	Planned	Not Planned	In Place	In Place	Not Planned	In Place	Not Planned
	In Place	Planned	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place
Not Planned	Milliseconds		Seconds		Real Time		30 Seconds Max	5 Seconds		Near Real Time	Real-Time		Less than 1 second
Not Planned	Not Planned	Planned	Planned	In Place	In Place	Planned	In Place	Planned	Not Planned	Planned	Planned	Planned	Planned
Planned	In Place	Planned	In Place	Planned	Not Planned	Planned	In Place	Planned	Not Planned	In Place	Not Planned	In Place	Not Planned
Planned	Not Planned	Planned	Planned	Planned	Not Planned	Not Planned	In Place		Not Planned	Planned	Not Planned	In Place	
In Place	Not Planned	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place	Planned	Planned
Planned	In Place	In Place	In Place	In Place	In Place	In Place	In Place	In Place	Not Planned	In Place	In Place	In Place	Planned
X		X	X			X	X	X	X	X	X		
X			X		X	X	X	X		X	X		
			X										
In Place	In Place	In Place	In Place	Not Planned	Not Planned	Not Planned	Not Planned	Not Planned	In Place	In Place	In Place	Planned	Not Planned
No	No	No	Yes	No	No	No	No	No	No	Yes	No		No