NYSE EURONEXT

NYSE Operations

July 17, 2012

TO: ALL MEMBERS, MEMBER ORGANIZATIONS
                and Vendors Interfacing with the Common Customer Gateway^{SM} (CCG) or the Binary
                Common Customer Gateway

SUBJECT: Technical Changes in Support of Retail Order Program

ROUTE TO: Business Leaders, Technology and Operations Officers, Trading Desks and Order
                Rooms

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Background

This notification details the CCG and Binary CCG technical changes in support of the new Retail Liquidity
Program.

Customers may route new Retail Price Improvement orders or Retail Taker orders directly to the NYSE
Matching engine only. Any Retail order destined to the NYSE Broker Systems (NYSE BBSS® and NYSE eBroker™
handheld) will be rejected back to the originator.

Binary customers wishing to take advantage of the Retail Program will need to support the new Binary
message variants as defined in the NYSE UTP Direct Specification version 1.9 dated 1/26/2012. FIX customers
wishing to take advantage of the Retail Program will need to support the follow FIX changes as defined in the
NYSE Common Customer Gateway Specification version 5.2 dated 1/26/2012.

Retail Taker Orders:

For Retail Member Organizations who have been approved by the Exchange to submit Retail Taker order flow and have established separate retail mnemonics, the following order types will be made available:

Retail Taker Order Type Designations:

Three new Retail Taker orders types are being established by using the Routing Instruction field in both FIX and Binary message protocol formats.

1. Retail-Only Orders (RTO designation) – interacts with Retail Providing interest only.

2. Retail Non-Routable Orders (RTNR designation) – interact with Retail Providing interest and/or other interest that resides on the Limit Order Book.

3. Retail Routable Orders (RTR designation) – interact with Retail Providing interest, other interest that resides on the Limit Order Book and/or can be routed away to other markets for execution.

Order Characteristics:
a. Will be accepted only after a stock is opened.
b. Will be cancelled if auto-execution is suspended.
c. Will be accepted in sub-pennies when priced below $1.00. Any RO priced in sub-pennies at or above $1.00 will be rejected as an invalid price.
d. Will be eligible to interact with other non-Retail orders if designated to do so by the order originator.

The following message types will require changes in order to take advantage of the new Retail Taker Order types:

FIX Messages	Binary Messages
"D" – New Order	"D.2" – New Order
"G" – Cancel with Replacement	"G.2" – Cancel with Replacement

Summary of Messaging Changes:

FIX Tag	Field Name / Binary Field Name	Description	Req.	Valid Values
40	Order Type	Designated order type.	Y	1 – Market or 2 – Limit All others will be rejected.

44	Price	Indicates price on the order. Only allowable in sub-pennies below a dollar.	Y	.0001 – 999,999.99
47	Rule 80A	Designated order capacity or account type.	Y	A through Z except: G, S or V
54	Side	Designated side of the order.	Y	'1' Buy, '2' Sell, '5' Sell Short or '6' Sell Short Exempt
59	Time In Force	Time In Force of the order.	Y	'0' Day or '3' IOC Note1: All others will be rejected. Note2: All "Day" orders will be treated as IOC.
9487	Routing Instruction	User defined field to designate additional order instructions.	Y	RTO = Retail Only RTNR = Retail Non-Routable RTR = Retail Routable

Retail Taker Execution Report Messages:

1. Execution report messages will return a new value "9" in the Billing Indicator field/Fix Tag 9578.
   a. Note: Orders executed against existing interest in the Limit Order Book or with an Away Market will be designated with the appropriate existing billing indicator or Away Market values as today.

Retail Price Improvement (RPI) Orders:

Order Characteristics:
   a. Provide potential price improvement on incoming retail taker order flow in the form of non-displayed interest that is better priced than the protected best bid/offer (PBBO).
   b. Are triggered only for execution by one of the new incoming Retail Taker order types.
   c. Designates a minimum amount of price improvement (allowed in sub-pennies) by populating a new "OffsetPrice" field in the order message.

d. The limit price and offset price must be submitted in multiples of the minimum price improvement value, currently set at $0.0010.
e. Any RPI interest that would result in an execution below $1.00 will be prevented from trading, as per the Retail Liquidity Program rules.
f. If there is an eligible Retail Price Improvement Order on a side, an indicator will be published in the quote.
g. Will be accepted prior to the opening or during a trading halt/VTP, but will not trade until the stock is opened/re-opened.

Summary of Technical Changes:

For customers wishing to submit Retail Price Improvement order flow, the following system changes are required on all order and cancel/replacement messages:

FIX Tag	Field Name / Binary Field Name	Description	Req.	Valid Values
40	Order Type	Designated order type.	Y	'2' – Limit All others will be rejected.
44	Price	Indicates price on the order. Must be submitted in multiples of the minimum price improvement value ($0.0010).	Y	.0001 – 999,999.99
47	Rule 80A	Designated order capacity or account type.	Y	A through Z except: G, S, or V
54	Side	Designated side of the order.	Y	'1' Buy, '2' Sell, '5' Sell Short or '6' Sell Short Exempt
59	Time In Force	Time in Force of the order.	Y	'0' Day only All others will be rejected.
9403 (New)	Offset Price	Offset or minimum price improvement value (allowed in sub-pennies) from the current Bid or Offer.	Y	Tag is required if 9487 = RPI Value must be zero, greater than or equal to

				the minimum offset value ($0.0010) and must be in multiples of $0.0010.
No Fix Tag equivalent	Status Indicator (Binary CCG only)	Each bit position of the Status Indicator field will be used as a flag to indicate zero is valid value for an assigned field (supports 32 flag indicators).	C	Bit 0 represents the Zero Offset Price Flag. For Binary customers only: When Offset Price equals zero, this Bit must equal 1.
9487	Routing Instruction	User defined field to designate additional order instructions.	Y	"RPI" designates a RPI (Provider) order

Outgoing Messages (including reports and UROUTs):

1. The OffsetPrice field/Fix Tag 9403 will not be returned on any order acknowledgements, execution reports or UROUT messages.
2. Execution report messages will return a new value "8" in the Billing Indicator field/Fix Tag 9578 designating a Retail Provider execution.

Drop Copy Messages:

For customers subscribed to Order Drop Copy messages, FIX Tag 9403 (OffsetPrice) will be returned in your drop copy messages.

Merged Order Log File Enhancements:

In support of the Retail Liquidity Program the Merged Order Log Output is being enhanced to disseminate New Order Values and New Liquidity Indicator values. The following MOL/ MRO products are affected:

- Entering Firm MRO – Product ID 06220527
- Clearing Firm MRO – Product ID 06220564
- Badge Log MRO – Product ID 06200574
- Agency MRO – Product ID 06010578
- Entering Firm Print-Image – Product ID 06222466
- Clearing Firm Print-Image – Product ID 06040641

New values will be added to the Special Order Indicator (Position 129) on 1A and 1B records to reflect the Order Type and in the SOI column of the Print Image Reports.

Field Name	Position Start-End	Format (Length)	Field Value (New values)
Special Order Indicator	129-129	X(1)	W = Retail Liquidity Provider X = Retail Liquidity Taker – Retail Only Y = Retail Liquidity Taker – Retail and NYSE Z = Retail Liquidity Taker – Retail, NYSE and Regional

New Transaction Billing values will be added for to the Liquidity Indicator (Position 161) on 2A records for executions against Retail Orders. Note: "8" was previously used to denote DMM Billing. In the future those executions will contain a "0".

Field Name	Position Start-End	Format (Length)	Field Value (New values)
LIQUIDITY INDICATOR	161-161	X(1)	8 = RETAIL ORDER PROVIDER 9 = RETAIL ORDER TAKER

A revised version of the MRO IRS is on the NYSE Website at the following link: http://www.nyse.com/pdfs/SAHMROFormatsv5.0.pdf

Summary

Activation of the new Retail Order program is scheduled for August 1, 2012. Please contact your Relationship Manager or the contact below should you have any further business questions or comments:

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