

**Part III, Item 11(c)—Trading Services, Facilities and Rules**

**Request:** Explain the established; non-discretionary rules and procedures of the NMS Stock ATS, including order interaction rules for the priority, pricing methodologies, allocation, matching, and execution of orders and trading interest, and other procedures governing trading, such as price improvement functionality, price protection mechanisms, short sales, locked-crossed markets, the handling of execution errors, and the time-stamping of orders and executions.

**Response:** Typically, a resting Day order in Sigma X2 will execute against an incoming IOC order and Sigma X2 will classify the resting Day order as liquidity-providing and the IOC order as liquidity-taking. Please refer to the Matching Scenarios grid below for examples.

**Sigma X2 Matching Scenarios Examples (applies to orders with marketable limit prices)<sup>1</sup>**

			Sell					
			Incoming ("Liquidity-Taking")					
			Primary Peg IOC	Mid Peg IOC	Market Peg IOC	Primary Peg Day	Mid Peg Day	Market Peg Day
Buy	Resting ("Liquidity-Providing")	Primary Peg Day	No match	No match	Bid	No match	No match	Bid
		Mid Peg Day	No match	Mid	Mid	No match	Mid	Mid
		Market Peg Day	Offer	Mid	Mid	Offer	Mid	Mid
		Primary Peg IOC	Sigma X2 does not classify IOC orders as "liquidity-providing" <sup>2</sup>					
		Mid Peg IOC						
		Market Peg IOC						

1. The table reflects the matching/execution outcomes for Firm and Firm Up orders. As outlined in Part III Item 9.a, Conditional orders are never executed and, accordingly, the table is not applicable to Conditional orders.

2. A Firm Up IOC order can be Liquidity-Providing if it is the first-in-time of two Firm Up orders resulting from a Conditional to Conditional match. In such case, the behavior of the Firm Up IOC would be the same as the behavior of a Liquidity Providing Firm "Day" order as outlined above.

Additionally, set forth below is a chart that illustrates price improvement in Sigma X2.

Assume that the National Best Bid = \$20.00; the National Best Offer = \$20.10; National Best Mid = \$20.05

Buy Order	Sell Order	Execution Price
\$21.000	\$20.000	\$20.050
\$21.000	\$20.030	\$20.050
\$20.070	\$20.000	\$20.050
\$20.070	\$20.060	\$20.060
\$20.040	\$20.000	\$20.040
\$20.040	\$20.030	\$20.040