Appendix B.I – Market Quality Statistics

Scope

1.   Include all accepted orders received by the Trading Center, including orders that were cancelled or routed away.

2.   Direct Market Access orders reported to OATS under the same MPID used by an OTC Trading Center will be excluded.

3.   Orders received prior to April 4th, 2016 will be excluded.

4.   Statistics related to orders that are open across multiple days will be included on the date of order receipt. Executions, routes or cancellations that occur within 5 business days of order receipt will be included. Events that occur more than 5 business days after order receipt will be excluded. Orders open greater than 5 business days will <u>not</u> be counted as cancelled.

See also Section 3 of the Appendix B and C Data Statistics FAQs

General Guidance:

1. Time of Receipt is actual time of receipt or order effective time (wake up time) if order received prior to when it is eligible to trade. See also Section 7 of the Appendix B and C Data Statistics FAQs.

2. A valid NBBO is defined as a SIP published NBBO in either regular or extended hours.   For Trading Centers using proprietary feeds, a valid NBBO is defined as the NBBO derived from the proprietary feeds in either regular or extended hours.   Locked markets are considered valid quotes. A locked market is considered a valid NBBO with a zero spread. See Section 12 of the Appendix B and C Data Statistics FAQs for how to determine a valid NBBO in the case of a crossed market, excessive spread scenario or a variant midpoint.

3. Timestamp granularity should be treated as prescribed in Section 11 Section 7 of the Appendix B and C Data Collection FAQs

4. For OTC, each individual MPID will be considered its own Trading Center. An order routed to another MPID of the same firm will be considered routed away.

5. Cancel/replaces will be treated the same as new orders.

6. Stop and Stop Limit Orders received on or after April 4, 2016 and triggered within 150 calendar days of receipt will be included on the day they are triggered and the stop trigger time will be used as the order effective time.

7. Marketability for orders immediately routed to a foreign market priced in US dollars will be based on the US NBBO in effect at order receipt or order effective time.

See also Section 4 of the Appendix B and C Data Statistics FAQs

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
1		Date	Represent as: YYYYMMDD No dashes between year, month, date to reduce file size		Represents order received date	
2	B.I.a.(1)	Trading Center	Represent as: A, B, C, D, I, J, K, M, N, P, Q, T, V, W, X,Y,Z or MPID			
3	B.I.a.(2)	Symbol	Format as published by the listing exchanges and on the FINRA website.	Q2.5		
4		Test Group	C = Pilot Securities in Control Group G1 = Pilot Securities in Test Group One G2 = Pilot Securities in Test			

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
			Group Two G3 = Pilot Securities in Test Group Three			
5	B.I.a.(3)	Order Type	10- 21 (integer) 10 – Market Orders 11 – Marketable Limit Orders 12 – Inside-the-quote Limit Orders 13 – At-the-quote Limit Orders 14 – Near-the-quote Limit Orders (within .10 from the NBBO) 15 – Resting Intermarket Sweep Orders 16 – Retail Liquidity Providing Orders 17 – Midpoint Passive Liquidity Orders 18 – Not Held Orders 19 – Clean Cross Orders 20 – Auction Orders 21 –Orders that became effective when an invalid NBBO was in effect 22 – Away From Market Orders	Section 2 and 8	*See FAQ 3.3 for hierarchy of Order Type Code Assignment*	
5a		Reg NMS	For Order Type = 19, set		QCTs/Benchmarks will	

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
		Exempt	flag to Y or N; for all other order types, this field must be left blank		have this flag set to Y	
5b		**Tick Size Special Handling Indicator**	Set to Y or N for all order types		FINRA and the exchanges to align codes as practicable. The following OATS special handling codes will be considered special handling: SLD, CPR, AOB, AON, CND, CSH, DLO, E.W, FOK, IDX, G, LOO, LOC, MOO, MOC, MAO, MAC, IO, MOB, MQT, ND, OPT, OVD, PEG, S.W, SCL, SLR, TMO, TS, ALO, OPO, STP,F0, F3, F6, F7, F8, F9, FA, FC, FD, FI, FL, FM, FO, FP, FR, FT, FW, FY, Fd, Fe	
5c		**Trading Session**	Reg-only - R Extended-only - E Reg and Extended with order effective time during Reg hours- BR Reg and Extended with		Trading Session represents when the order is eligible to trade, except for BR and BE which denotes both when an order became	

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
			order effective time during extended - BE		effective and when it was eligible to trade	
5d		Multiday Order	This field must be set to Y if the order is open and eligible for execution for more than 1 trading day, if not set to N			
6	B.I.a.(4)	Original Order Size	0 (less than 100 shares) 1 (100 to 499 shares) 2 (500 to 1999 shares) 3 (2000 to 4999 shares) 4 (5000 to 9999 shares) 5 (10,000 or more shares)			
7	B.I.a.(5)	Hidden Status Category	0 (entirely displayable) 1 (partially displayable) 2 (not displayable)	Q4.14, Q4.16	For OTC Trading Centers, this is only applicable if the Trading Center is an ADF Quoting Participant. If OTC Trading Center is not an ADF Participant, value will always be "2".	
8	B.I.a.(6)	Rule 605 Coverage	Represent as: Y/N	Q4.8, Q4.9, Q2.1, Q2.3, Q4.2, Q4.5	For OTC Trading Centers, this represents if order was eligible for 605, NOT whether the Trading Center actually included it in its 605 statistics	

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
9	**SRO Rule, Suppl. Mat. .03**	**Affected by LULD Bands**	Y – Price Band affected the ability to execute an order at order effective time N – Price Band did not affect the ability to execute an order at order effective time	Q4.10		
10	**SRO Rule Suppl. Mat. .03**	**Foreign Routing Flag**	Y - order was fully or partially routed to a foreign market N - order was executed domestically			
11	**B.I.a.(7)**	**Cumulative Number of Orders**				
12	**B.I.a.(8)**	**Cumulative Number of Shares of Orders**				
13	**B.I.a.(9)**	**Cumulative Number of Shares of Orders Canceled**		Q3.14, Q4.5, Q3.6	If order expires, consider unexecuted shares canceled. Include unexecuted IOC orders.	
14	**B.I.a.(10)**	**Cumulative**	Receiving Trading Center is	Q4.5		E

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
		Number of Shares of Orders Executed on the Receiving Trading Center	the Trading Center at which the order was received (associated with exchange code or MPID above)			
15	**B.I.a.(13)**	**Cumulative Number of Shares of Orders Executed at an Away Trading Center**	Aggregate of shares executed at away trading centers.	Q4.5		R
16	**B.I.a.(14)**	**Cumulative Number of Shares of Orders Executed From 0 to Less Than 100 Microseconds**	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt.	Q4.7, Q4.19, Q7.4, Q7.2, Q11.3, Q7.3, Q7.5	Includes away executions. Use away execution time details if available, else use the "confirmation time" from the executing venue.	B
16A	**B.I.a.(14A)**	**Cumulative Number of Shares of Orders Executed From 100 Microseconds to Less Than 1**	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt.	Q4.7, Q4.19, Q7.4, Q7.2, Q11.3, Q7.3, Q7.5	Includes away executions. Use away execution time details if available, else use the "confirmation time" from the executing venue.	B

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
		Millisecond				
17	B.I.a.(15)	Cumulative Number of Shares of Orders Executed From 1 Millisecond to Less than 100 Milliseconds	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt.	Q4.7, Q4.19, Q77.4, Q7.2, Q11.3, Q7.3, Q7.5	Includes away executions. Use away execution time details if available, else use the "confirmation time" from the executing venue.	B
18	B.I.a.(16)	Cumulative Number of Shares of Orders Executed From 100 Milliseconds to Less Than 1 Second	Calculate from order effective time Adjust for halt time if an order becomes effective prior to a halt and is executed or cancelled after the halt.	Q4.7, Q4.19, Q7.4, Q7.2, Q11.13, Q7.3, Q7.5	Includes away executions. Use away execution time details if available, else use the "confirmation time" from the executing venue.	B
19	B.I.a.(17)	Cumulative Number of Shares of Orders Executed From 1 Second to Less Than 30 Seconds	Calculate from order effective time Adjust for regulatory halt time if an order becomes effective prior to a halt and is executed or cancelled after the halt.	Q4.7, Q4.19, Q7.4, Q7.2, Q11.3, Q7.3, Q7.5	Includes away executions. Use away execution time details if available, else use the "confirmation time" from the executing venue.	B

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
20	B.I.a.(18)	Cumulative Number of Shares of Orders Executed From 30 Seconds to Less Than 60 Seconds	Calculate from order effective time Adjust for regulatory halt time if an order becomes effective prior to a halt and is executed or cancelled after the halt.	Q4.7, Q4.19, Q7.4, Q7.2, Q11.3, Q7.3, Q7.5	Includes away executions. Use away execution time details if available, else use the "confirmation time" from the executing venue.	B
21	B.I.a.(19)	Cumulative Number of Shares of Orders Executed From 60 Seconds to Less Than 5 Minutes	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt.	Q4.7, Q4.19, Q7.4, Q7.2, Q11.3, Q7.3, Q7.5	Includes away executions. Use away execution time details if available, else use the "confirmation time" from the executing venue.	B
22	B.I.a.(20)	Cumulative Number of Shares of Orders Executed From 5 Minutes to Less Than 30 Minutes	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt. **If execution is over 30 minutes, the shares will not be accumulated in any of	Q4.7, Q4.19, Q7.4, Q7.2, Q11.3, Q7.3, Q7.5	Includes away executions. Use away execution time details if available, else use the "confirmation time" from the executing venue.	B

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
			fields 18 through 22.			
23		**Cumulative Number of Shares of Unexecuted IOC Orders**	Shares of IOC orders received by the Trading Center that were not executed			
24	**B.I.a.(21)**	**Cumulative Number of Shares of Orders Canceled From 0 to Less Than 100 Microseconds**	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt. Exclude unexecuted IOC orders	Q4.7, Q3.14,Q4.19, Q7.2, Q11.3, Q4.18, Q7.3, Q7.5		
24A	**B.I.a.(21A)**	**Cumulative Number of Shares of Orders Canceled From 100 Microseconds to Less Than 1 Millisecond**	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt. Exclude unexecuted IOC orders	Q4.7, Q3.14,Q4.19, Q7.2, Q11.3, Q4.18, Q7.3, Q7.5		

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
25	B.I.a.(22)	**Cumulative Number of Shares of Orders Canceled From 1 Millisecond to Less Than 100 Milliseconds**	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt. Exclude unexecuted IOC orders .	Q4.7, Q3.14,Q4.19, Q7.2, Q11.3, Q4.18, Q7.3, Q7.5		
26	B.I.a.(23)	**Cumulative Number of Shares of Orders Canceled From 100 Milliseconds to Less Than 1 Second**	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt. Exclude unexecuted IOC orders	Q4.7, Q7.5, Q7.2, Q4.18, Q7.3, Q7.5		
27	B.I.a.(24)	**Cumulative Number of Shares of**	Calculate from order effective time	Q4.7, Q3.14, Q7.2, Q4.18, Q7.3, Q7.5		

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
		Orders Canceled From 1 Second to Less Than 30 Seconds	Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt. Exclude unexecuted IOC orders			
28	B.I.a.(25)	Cumulative Number of Shares of Orders Canceled From 30 Seconds to Less Than 60 Seconds	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt. Exclude unexecuted IOC orders	Q4.7, Q3.14, Q7.2, Q4.18, Q7.3, Q7.5		
29	B.I.a.(26)	Cumulative Number of Shares of Orders Canceled From 60 Seconds to Less Than 5	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or	Q4.7, Q3.14, Q7.2, Q4.18, Q7.3, Q7.5		

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
		Minutes	cancelled after the halt. Exclude unexecuted IOC orders			
30	B.I.a.(27)	Cumulative Number of Shares of Orders Canceled From 5 Minutes to Less Than 30 Minutes	Calculate from order effective time Adjust for regulatory halt time if an order arrives prior to a halt and is executed or cancelled after the halt. **If cancelled after 30 minutes, the cancelled shares will not get accumulated in any of fields 23-29.	Q4.7, Q3.14, Q7.2, Q4.18, Q7.3, Q7.5		
31	B.I.a.(28)	Share Weighted Average Realized Spread for Executions of Orders on	Calculate only for executions effected on the Trading Center (exclude routed fills) Use the NBBO in effect 5 minutes after execution.	Q7.4, Q12.14, Q4.3	This field is not calculated for Order Types 19 Use valid NBBO (as	E

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
		Trading Center only	Use most recent NBBO, even if published prior to the execution. 4 decimal places for all fields containing averages. Rounded to the near 4 decimal places (up or down) will be used for all averages that calculate with more than 4 decimal places for all reports.		defined in general guidance #2 above) in effect at the Execution time + 5 minutes. If no valid NBBO found then exclude the order from this calculation.	
32	B.I.a.(29)	Original Percentage Hidden	Received share-weighted average percentage of shares not displayable at order effective time.		Display as 100.0000 for 100% Field#7 category 0, display as 0.0000	
33	B.I.a.(30)	Final Percentage Hidden	Received share-weighted average percentage of shares not displayed prior to final execution or cancellation. *Calculation excludes routed shares.	Q4.15	Display as 100.0000 for 100% Field#7 category 0, display as 0.0000	
34	B.I.a.(31)	Same Side Quoted Size	Share-weighted average of the consolidated quoted size at the inside price at order effective time.	Q4.7,Q4.13, Q7.2, Q12.9, A4.20, Q12.11, Q12.13	Use max size not aggregated size Use actual shares	

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
					Use size of order for the order being included This field is not calculated for Order Type Codes 19 Reg NMS Exempt, 20 and 21.	
35	B.I.a.(31)	**Opposite Side Quoted Size**	Share-weighted average of the consolidated quoted size at the inside price at order effective time.	Q4.7,Q4.13, Q12.2, Q12.3, Q12.5, Q7.2, Q12.9, Q4.20, Q12.11, Q12.13	Use max size not aggregated size Use actual shares Use size of order for the order being included This field is not calculated for Order Type Codes 19 Reg NMS exempt, 20 and 21.	
36	B.I.a.(32)	**Share Weighted Average NBBO Spread at the**		Q4.7, Q4.13, Q12.2, Q12.3, Q7.2, Q7.5, Q12.11,	Use size of order for the order being included Use Valid NBBO in effect at order effective	

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
		Time of Order Receipt (Order Effective Time)		Q12.13	time *This field is not calculated for Order Type Codes 19 Reg NMS Exempt, 20 and 21.*	
37	B.I.a.(33)	Share Weighted Average BBO Spread of Trading Center at the Time of Order Receipt (Order Effective Time)	Use Trading Center's BBO	Q4.7, Q12.2, Q12.3, Q7.2, Q12.10, Q7.5, Q12.12, Q12.13	For OTC, only applies to ADF quotingparticipants Use size of order for the order being included Use valid BBO in effect at order effective time *This field is not calculated for Order Type Codes 19 Reg NMS Exempt, 20 and 21.*	
B.1.b Applies Only to Order Types 10 and 11 with no Tick Size Special Handling						
38	B.I.b.(1)	Share-Weighted		Q7.5, Q12.7	Use valid NBBO (as defined in general	E

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
		Average Effective Spread for Executions of Orders	Compute effective spread based on the execution price compared to the NBBO at order effective time. Calculation is as follows: For sells: (Midpoint - Execution Price) x 2 For buys: (Execution Price – Midpoint) x 2 The number is then share weighted by multiplying each observation by the shares in the trade, and dividing by the sum of all those shares traded Refer to the Rule 605 FAQs for details on computation.		guidance #2 above) in effect at order effective time. If no valid NBBO found then exclude the order from this calculation.	
39	B.I.b.(2)	**Cumulative Number of Shares of Orders Executed with Price Improvement**	Accumulate the number of executed shares for each order that executed between the NBBO at Order effective time	Q12.8		E

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
40	**B.I.b.(3)**	**Share-Weighted Average Amount per Share that Prices were Improved**		Q12.8		E
41	**B.I.b.(4)**	**For shares executed with price improvement, Share-Weighted Average Period from the Time of Order Receipt or Effective Time to the Time of Order Execution**	Display in microseconds, or most granular time available if microseconds are unavailable HHHHMMSS.000000			E
42	**B.I.b.(5)**	**Cumulative Number of Shares of Orders Executed at the Quote at Order**	.			E

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
		Receipt or Effective Time				
43	B.I.b.(6)	For shares executed at the quote, Share-Weighted Average Period from the Time of Order Receipt or Effective Time to the Time of Order Execution	Display in microseconds, or most granular time available if microseconds are unavailable HHHHMMSS.000000			E
44	B.I.b.(7)	Cumulative Number of Shares of Orders Executed Outside the Quote at Order Receipt or Effective Time	For market and marketable limit orders ONLY executed on Trading Center (not routed). Include ISO IOC orders.			E
45	B.I.b.(8)	Share-Weighted Average Amount per	For market and marketable limit orders ONLY executed on Trading Center (not routed).			E

Sequence Number	Appendix B.I Reference	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
		Share That Prices were Outside the Quote at Order Receipt or Effective Time				
46	**B.I.b.(9)**	**For shares executed outside the quote, Share-Weighted Average Period from the Time of Order Receipt or Effective Time to the Time of Order Execution**	Display in microseconds, or most granular time available if microseconds are unavailable HHHHMMSS.000000			E

Appendix B.II – Market and Marketable Limit order Data

Scope

    I.   Order Type Codes 10 and 11 that are either executed immediately in full or part at the receiving Trading Center or an Away Trading Center OR are immediately cancelled in full or part by the customer or reporting Trading Center, including IOC orders that are not executed.

    II.   "Non-booked" will not be used as a criteria for executions at an OTC Trading Center or executions at an away Trading Center.

See also Section 5 of the Appendix B and C Data Statistics FAQs

General Guidance:

    1.   Immediately is defined as 3 seconds.   This is based on a one second clock drift standard for OTC Trading Centers.

    2.   All other General Guidance for B.I above applies to B.II.

See also Section 6 of the Appendix B and C Data Statistics FAQs

B.II field # reference only	Appendix B.II Item	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
1	B.II.a	Trading Center	Represent as: A, B, C, D, I, J, K, M, N, P, Q, T, V, W, X,Y,Z or MPID			
2	B.II.b	Symbol	Format as published by the listing exchanges and on the FINRA website.			

B.II field # reference only	Appendix B.II Item	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
3	B.II.c	Date	Represent as: YYYYMMDD			
4	B.II.d	Time of Order Receipt	Represent as: HHMMSS.000000 (microseconds, if available)			
5	B.II.e	Order Type	Represent as: 10 = Market Order 11 = Marketable Limit Order	Q3.3		
6	B.II.f	Order Size	Integer			
7	B.II.g	Order Side	Represent as: B, Sand SS	Q6.6	Sell Short Exempt orders are represented as 'S'.	
8	B.II.h	Order Price	Number, use decimal place, blank if market order – maximum 4 decimal places	Q8.2, Q8.3		
9	B.II.i	NBB Quoted Price	Use valid NBB at order effective time	Q12.5		
10	B.II.j	NBB Quoted Size	Use valid NBB at order effective time	Q6.1	Use max size not aggregated size	
11	B.II.i	NBO Quoted Price	Use a valid NBO at order effective time			
12	B.II.j	NBO Quoted Size	Use a valid NBO at order effective time	Q6.1	Use max size not aggregated size	

B.II field # reference only	Appendix B.II Item	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
13	B.II.k	Trading Center Bid or Offer	Use the Trading Center's best offer for buy orders and best bid for sell orders	Q6.3, Q6.5	For OTC Trading Centers this is always null unless the Trading Center is quoting on the ADF	
14	B.II.l	Trading Center Size	Use the Trading Center's depth of the best offer for buy orders and depth of the best bid for sell orders	Q6.4, Q6.5	For OTC Trading Centers this is always null unless the Trading Center is quoting on the ADF	
15	B.II.m	ISO/TAISO Flag	Represent as: N – No I – ISO T – TAISO		Represents if the Trading Center received the order marked as an ISO or TAISO	
16	B.II.n	Retail Investor Order Flag	Represent as: Y/N **This will be set to "N" during the pre-pilot period.	Q6.7	Represents if the Trading Center relied on the retail investor order exception to Test Groups Two and Three when executing the order.	
17	B.II.o	Routable Flag	Represent as: Y/N	Q4.21	Represents if order is eligible to be routed away for execution	
18	B.II.p	IOC	Represent as: Y/N			

B.II field # reference only	Appendix B.II Item	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
19		**Affected by LULD Bands**	Y – Price Band affected the ability to execute an order at order effective time N – Price Band did not affect the ability to execute an order at order effective time	Q4.10		
20	**SRO Rule Suppl. Mat. .03**	**Foreign Routing Flag**	D = directed to a domestic venue for execution. F = may only be directed to a foreign venue for execution B = fully or partially directed to a foreign venue at the discretion of the broker-dealer that received the order			
21	**B.II.q**	**Indicator for Quote Leader**	Represent as: "1" if the Trading Center improved the NBB for a sell or NBO for a buy (as applicable) from the previous NBB/NBO, use "0" if not. Leave blank if the NBB/NBO did not improve the price from the previous NBB/NBO.		*This indicates if the Trading Center's quote improved the relevant side of the market.*	
22	**B.II.r**	**Average Execution Price-**	Defined as the price calculated by summing up			E

B.II field # reference only	Appendix B.II Item	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
		Share-Weighted Average	the products of the number of single-counted (meaning only one side of trade is counted) shares traded and the respective share price, and dividing by the total number of single-counted shares traded. If no shares are executed, or all shares are routed, code as "blank"			
23	**B.II.s**	**Average Execution Time- Share-Weighted Average**	Example: Execution 1 – 100 shares, 30 seconds to execute Execution 2 – 200 shares, 60 seconds to execute Result: 50 seconds or 00000050.000000 If no shares are executed, or all shares are routed, code as "blank" Display in microseconds, or most granular time available if microseconds are unavailable. HHHHMMSS.000000			E

B.II field # reference only	Appendix B.II Item	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
24	B.II.t	Executed Shares	If no shares executed, then code as "0"	Q4.5, Q6.8		E
25	B.II.u	Cancelled Shares	# of shares in the order that are cancelled (if no shares are cancelled, code as "0")	Q6.9	Shares cancelled by customer or reporting TC	
26	B.II.v	Routed Shares	# of shares in the order that are executed at an away Trading Center (if no shares are executed at an away Trading Center, code as "0")		Include only domestic executions	R
27	B.II.w	Routed Averages Execution Price-Share-Weighted Average	Include only executions that occurred at an away Trading Center if no shares are executed at an away Trading Center, code as "blank"		Include only domestic executions	R
28	B.II.x	Average Routed Execution Time-Share-Weighted Average	Include only executions that occurred at an away Trading Center if no shares are executed at an away Trading Center, code as "blank" Display in microseconds, or most granular time available if microseconds are unavailable.	Q7.4, Q7.3, Q6.2, Q7.5	Include only domestic executions	R

B.II field # reference only	Appendix B.II Item	Field Name	Description	Relevant FAQs	Notes	Executed shares Included by Executing Trading Center (E), Routing Trading Center (R) or Both (B)
			HHHHMMSS.000000			
29	B.II.y	Indicator For Tick Size Special Handling	Identifies orders that contain instructions that could result in delayed execution or an execution price other than the quote Represent with value of 'Y' or 'N'	Q8.2, Q8.3	Use same list of Tick Size SH codes as in B.I FINRA and the exchanges to align codes as practicable. The following OATS special handling codes will be considered special handling: SLD, CPR, AOB, AON, CND, CSH, DLO, E.W, FOK, IDX, G, LOO, LOC, MOO, MOC, MAO, MAC, IO, MOB, MQT, ND, OPT, OVD, PEG, S.W, SCL, SLR, TMO, TS, ALO, OPO, STP, F0, F3, F6, F7, F8, F9, FA, FC, FD, FI, FL, FM, FO, FP, FR, FT, FW, FY, Fd, Fe	

Appendix B.III – Daily Market Maker Registration Statistics

Field # - for reference only	Field Name	Alpha or Numeric	Max Data Length	Description
1	Date	Numeric	8	Represent as: YYYYMMDD
2	Symbol	Alpha	14	Format as published by the listing exchanges and on the FINRA website.
3	Participant	Alphanumeric	4	Represent as: A, B, C, D, I, J, K, M, N, P, Q, T, V, W, X,Y,Z
4	Count of Registered Market Makers	Numeric	4	# of Market Makers in security on that date
5	Count of Other Registered Liquidity Suppliers	Numeric	4	

Appendix B.IV – Daily Market Maker Participation Statistics

Scope

1. Executions by a Tick Size Market Maker in a principal capacity, not including riskless
2. Data for calculations will be obtained from the Market Maker Transaction Files Submitted to FINRA
3. Includes both regular and extended hours

General Guidance:

1. Use market maker perspective for side of order
2. Use same Valid NBBO definition as for B.I relative NBBO calculations
3. If invalid NBBO, do not include in B.IV.d,e,f and g (Reference fields 10-25)

See also Section 10 and 12 of the Appendix B and C Data Statistics FAQs

B.IV field # reference only	Appendix B.IV Item	Field Name	Description	Relevant FAQs	Notes
1		**Trading Center**	Represent as: A, B, C, D, I, J, K, M, N, P, Q, T, V, W, X,Y,Z or MPID		
2		**Date**	Represent as: YYYYMMDD No dashes between year, month, date to reduce file size		
3	**B.IV.a**	**Symbol**	Format as published by the listing exchanges and on the FINRA website.		
4		**Number of Unique Market Makers Buy Side**		Q10.12	Number of distinct market makers with buy transactions
5		**Number of Unique Market Makers Sell Side**		Q10.12	Number of distinct market makers with sell transactions
6	**B.IV.b**	**Share Participation (Buy)**	# of shares bought by Market Maker as principal.		
7	**B.IV.b**	**Share Participation (Sell)**	# of shares sold (includes "sell", "sell short", "short exempt") by Market Maker as principal.		
8	**B.IV.c**	**Trade Participation Buy**	Count of buys as principal.		
9	**B.IV.c**	**Trade Participation Sell**	Count of trades (sells) as principal.		

B.IV field # reference only	Appendix B.IV Item	Field Name	Description	Relevant FAQs	Notes
10	B.IV.d	CROSS-QUOTE SHARE PARTICIPATION (BUY)	# of shares purchased at or above the NBO at the time of trade. Use the NBO in effect immediately prior to execution.		
11	B.IV.d	CROSS-QUOTE SHARE PARTICIPATION (SELL)	# of shares sold (includes "sell", "sell short", "short exempt") at or below the NBB at the time of trade. Use the NBB in effect immediately prior to execution.		
12	B.IV.d	CROSS-QUOTE TRADE PARTICIPATION (BUY)	Count of trades (buys) at or above the NBO in effect immediately prior to execution.		
13	B.IV.d	CROSS-QUOTE TRADE PARTICIPATION (SELL)	Count of trades sold (includes "sell", "sell short", "short exempt") at or below the NBB in effect immediately prior to execution.		
14		# of Unique Market Makers in Buy Side Cross-Quote Calculations			
15		# of Unique Market Makers in Sell Side Cross-Quote Calculations			
16	B.IV.e	INSIDE-THE-QUOTE SHARE PARTICIPATION (BUY)	# of shares purchased between the NBBO in effect immediately prior to execution.		
17	B.IV.e	INSIDE-THE-QUOTE SHARE PARTICIPATION (SELL)	# of shares sold (includes "sell", "sell short", "short exempt") between the NBBO in effect immediately prior to execution.		

B.IV field # reference only	Appendix B.IV Item	Field Name	Description	Relevant FAQs	Notes
18	B.IV.e	INSIDE-THE-QUOTE TRADE PARTICIPATION (BUY)	Count of trades (buys) between the NBBO in effect immediately prior to execution.		
19	B.IV.e	INSIDE-THE-QUOTE TRADE PARTICIPATION (SELL)	Count of trades sold (includes "sell", "sell short", "short exempt") between the NBBO in effect immediately prior to execution.		
20		# of Unique Market Makers in Buy Side Inside-the-quote Calculations			
21		# of Unique Market Makers in Sell Side Inside-the-quote Calculations			
20	B.IV.f	AT-THE-QUOTE SHARE PARTICIPATION (BUY)	# of shares purchased that are equal to the NBB in effect immediately prior to execution.		
21	B.IV.f	AT-THE-QUOTE SHARE PARTICIPATION (SELL)	# of shares sold (includes "sell", "sell short", "short exempt") that are equal to the NBO in effect immediately prior to execution.		
22	B.IV.f	AT-THE-QUOTE TRADE PARTICIPATION (BUY)	Count of trades (buys) that are equal to the NBB in effect immediately prior to execution.		
23	B.IV.f	AT-THE-QUOTE TRADE PARTICIPATION (SELL)	Count of trades (includes "sell", "sell short", "short exempt") that are equal to the NBO in effect immediately prior to execution.		
24		# of Unique			

B.IV field # reference only	Appendix B.IV Item	Field Name	Description	Relevant FAQs	Notes
		Market Makers in Buy Side At-the-quote Calculations			
25		# of Unique Market Makers in Sell Side At-the-quote Calculations			
26	B.IV.g	OUTSIDE-THE-QUOTE SHARE PARTCIPATION (BUY)	# of shares purchased that are less than the NBB in effect immediately prior to execution.		
27	B.IV.g	OUTSIDE-THE-QUOTE SHARE PARTCIPATION (SELL)	# of shares sold (includes "sell", "sell short" and "short exempt") that are greater than the NBO in effect immediately prior to execution.		
28	B.IV.g	OUTSIDE-THE-QUOTE TRADE PARTCIPATION (BUY)	Count of trades (buys) that are less than the NBB in effect immediately prior to execution.		
29	B.IV.g	OUTSIDE-THE-QUOTE TRADE PARTCIPATION (SELL)	Count of trades (includes "sell", "sell short" and "short exempt") that are greater than the NBO in effect immediately prior to execution.		
30		# of Unique Market Makers in Buy Side Outside-the-quote Calculations			
31		# of Unique Market Makers in Sell Side Outside-the-quote Calculations			

Appendix C – Daily Market Maker Profitability Statistics

Scope

    1. Data for calculations will be obtained from the Market Maker Transaction Files Submitted to FINRA
    2. Includes both regular and extended hours

See also Section 13 of the Appendix B and C Data Statistics FAQs

General Guidance:

For purposes of calculating C.I and C.II, the closing price shall be the closing price as reported by the primary listing exchange. If no closing price is published by the primary listing exchange, then the consolidated last sale for the day should be used. If there is not a valid consolidated last sale for the day, then the most recent prior valid consolidated last sale should be used.

SEC File:

C field # reference only	Appendix C Item	Field Name	Description	Relevant FAQs	Notes
1		**Market Maker**	Represent as: CRD #		
2		**Symbol**	Format as published by the listing exchanges and on the FINRA website.		
3		**Date**	Represent as: YYYYMMDD		
4	**C.I.a**	**Total Shares Executed by the Market Maker**			

C field # reference only	Appendix C Item	Field Name	Description	Relevant FAQs	Notes
5	C.I.b	Raw MM Realized Profit		Q13.1	
6	C.I.c	Raw MM Unrealized Profit		Q13.1	
6		EOD Excess/Deficit	The shares quantity of the end of day excess or deficit. Deficits will be expressed as a negative number.		
7		VWAP of Excess/Deficit	The volume weighted average price of the shares comprising the end of day excess or deficit.		
8		Closing Price	Closing Price used for Raw Unrealized Profit		

Consolidated Industry Statistic on FINRA.org

DEA field # reference only	Appendix C Item	Field Name	Description	Relevant FAQs	Notes
1		Test Group	C = Pilot Securities in Control Group G1 = Pilot Securities in Test Group One G2 = Pilot Securities in Test Group Two G3 = Pilot Securities in Test Group Three		
2		Date	Represent as: YYYYMMDD		
4	C.II.a.	Total Raw MM Realized Profit			
5	C.II.b	Volume-weighted			

DEA field # reference only	Appendix C Item	Field Name	Description	Relevant FAQs	Notes
		average of Raw MM Realized Profit			
6	C.II.c	Total Raw MM Unrealized Profit			
7	C.II.d	Volume-weighted average of Raw MM Unrealized Profit			

Change Log

Version Number	Description of Changes
1.0 – 6/13/2016	Initial Version
1.1 – 10/24/2016	1.) Throughout - Added 'V' (IEX) as a valid Trading Center 2.) Throughout - Modified description of symbol format to state listing exchange format 3.) B.I Sequence 5 - Updated "Order Type" field value '21' definition to conform with FAQs 4.) B.I Sequence 5b – Added OATS Special Handling Codes of ALO, STP and OPO 5.) B.I Sequence 41 – Modified field format 6.) B.II Sequence 7 – Clarified description of allowable values to state that Sell Short Exempt orders are represented as 'S'. 7.) B.II Sequence 23 – Corrected example and modified format 8.) C – Updated General Guidance to conform definition of closing price with FAQs