

MIAX PEARL Appendix A

Obvious and Catastrophic Errors During Limit and Straddle States

For the month of September 2018, the MIAX PEARL Exchange collected the following dataset containing the data for each Straddle and Limit State in optionable stocks.

Stock Symbol	Option Symbol	Trade Date	LULD Start Time	Straddle Limit Indicator	Executed Volume	TW Avg MBBO Spread	TW Avg Quote Bid Size	TW Avg Quote Ask Size	High Execution Price	Low Execution Price	Trades Reviewed for Error	Price Change GT 30 PCT in LULD	Price Change GT 30 PCT After LULD
OPK	OPK-2019-03-15-P-3.00	9/7/2018	2:14:56 PM	STRADDLE	34	0.06	0	1	0.4	0.4	N/A	0	0
OPK	OPK-2018-09-21-P-4.50	9/7/2018	2:15:00 PM	STRADDLE	50	4.8	0	0	0.8	0.8	N/A	0	0
TLRY	TLRY-2018-10-26-C-190.00	9/19/2018	2:52:36 PM	STRADDLE	1	5.01	0.24	0.24	92	92	N/A	0	0
TLRY	TLRY-2018-10-19-P-50.00	9/19/2018	2:52:36 PM	STRADDLE	2	0.8	0.02	0.24	2	2	N/A	1	0
TLRY	TLRY-2018-09-28-P-260.00	9/19/2018	2:52:36 PM	STRADDLE	1	5.01	0.24	0.24	69.3	69.3	N/A	0	0
TLRY	TLRY-2018-11-02-P-55.00	9/19/2018	3:20:17 PM	STRADDLE	1	5	0.19	0.19	5.5	5.5	N/A	0	0
TLRY	TLRY-2018-10-19-C-170.00	9/19/2018	3:20:17 PM	STRADDLE	1	4.97	0.19	0.19	76.2	76.2	N/A	0	0
TLRY	TLRY-2018-09-28-C-300.00	9/19/2018	3:20:17 PM	STRADDLE	10	5.01	0.19	0.17	21.4	21.4	N/A	0	1
TLRY	TLRY-2018-09-28-C-290.00	9/19/2018	3:20:17 PM	STRADDLE	1	4.97	0.19	0.19	25	25	N/A	0	1
TLRY	TLRY-2018-09-28-P-200.00	9/19/2018	3:20:17 PM	STRADDLE	1	4.99	0.19	0.19	45	45	N/A	1	1
TLRY	TLRY-2018-09-28-P-190.00	9/19/2018	3:20:17 PM	STRADDLE	5	5.14	0.19	0.19	37.2	37.2	N/A	0	1
TLRY	TLRY-2018-09-21-C-180.00	9/19/2018	3:20:17 PM	STRADDLE	26	5.08	0.19	0.19	48.6	48.6	N/A	0	0
TLRY	TLRY-2018-09-21-P-60.00	9/19/2018	3:20:17 PM	STRADDLE	40	0.25	0	0.19	0.05	0.05	N/A	0	0
TLRY	TLRY-2018-09-21-P-148.00	9/19/2018	3:20:17 PM	STRADDLE	1	4.96	0.19	0.19	5	5	N/A	1	0
TLRY	TLRY-2018-09-21-P-90.00	9/19/2018	3:20:17 PM	STRADDLE	1	0.45	0.01	0.19	0.45	0.45	N/A	1	0
TLRY	TLRY-2018-09-28-P-70.00	9/19/2018	3:31:47 PM	STRADDLE	1	2.39	3.56	3.56	2.5	2.5	N/A	1	0
TLRY	TLRY-2018-09-21-P-78.50	9/19/2018	3:31:47 PM	STRADDLE	1	5.31	5.92	3.55	0.4	0.4	N/A	0	0
TLRY	TLRY-2018-10-19-P-24.00	9/19/2018	3:31:53 PM	STRADDLE	1	0.35	0	0	0.35	0.35	N/A	0	0
TLRY	TLRY-2018-10-26-P-200.00	9/19/2018	3:32:18 PM	STRADDLE	1	50	0	0	100	100	N/A	1	0
TLRY	TLRY-2018-09-21-P-55.00	9/19/2018	3:32:18 PM	STRADDLE	1	1.15	0	0	0.1	0.1	N/A	0	0

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TLRY	TLRY-2018-09-21-P-109.00	9/19/2018	3:32:20 PM	STRADDLE	1	1.9	0	0	2.5	2.5	N/A	1	0
TLRY	TLRY-2018-09-21-P-114.00	9/19/2018	3:32:20 PM	STRADDLE	1	3	0	0	3	3	N/A	0	0
TLRY	TLRY-2018-09-28-C-310.00	9/19/2018	3:32:20 PM	STRADDLE	1	6.79	0	0	6.6	6.6	N/A	1	0
TLRY	TLRY-2019-03-15-P-30.00	9/19/2018	3:32:28 PM	STRADDLE	3	4.7	0	0	4.7	4.7	N/A	1	0
TLRY	TLRY-2018-09-21-P-120.00	9/19/2018	3:32:28 PM	STRADDLE	1	6.2	0	0	3.3	3.3	N/A	1	0
TLRY	TLRY-2018-12-21-P-29.00	9/19/2018	3:32:37 PM	STRADDLE	1	3	0	0	3	3	N/A	0	0
TLRY	TLRY-2018-10-19-P-100.00	9/19/2018	3:32:37 PM	STRADDLE	1	23.95	0	0	25	25	N/A	1	0
TLRY	TLRY-2018-09-28-P-45.00	9/19/2018	3:32:37 PM	STRADDLE	1	0.35	0	0	0.25	0.25	N/A	0	1
TLRY	TLRY-2018-09-21-P-165.00	9/19/2018	3:32:37 PM	STRADDLE	12	989.47	0	0	25	25	N/A	1	1
TLRY	TLRY-2018-09-28-P-100.00	9/19/2018	3:47:17 PM	STRADDLE	1	10.6	0	0	5	5	N/A	1	0
TLRY	TLRY-2018-09-21-P-150.00	9/19/2018	3:47:17 PM	STRADDLE	1	23.15	0	0	8	8	N/A	0	0
TLRY	TLRY-2018-09-21-P-190.00	9/19/2018	3:47:23 PM	STRADDLE	1	31.17	0	0	19	19	N/A	0	0
TLRY	TLRY-2018-10-19-P-60.00	9/19/2018	3:47:39 PM	STRADDLE	5	7.92	0	0	5	5	N/A	0	0
TLRY	TLRY-2018-09-21-C-190.00	9/19/2018	3:47:39 PM	STRADDLE	5	50.03	0.02	0	40	40	N/A	0	0
TLRY	TLRY-2018-09-21-P-52.00	9/19/2018	3:47:39 PM	STRADDLE	1	8	0	0	0.1	0.1	N/A	0	0
CRBP	CRBP-2018-09-21-C-7.50	9/20/2018	9:56:37 AM	STRADDLE	11	0.49	0	0.06	0.05	0.05	N/A	0	1
ACAD	ACAD-2018-09-21-C-19.00	9/20/2018	12:24:42 PM	STRADDLE	2	2.54	0	0	0.55	0.55	N/A	0	1
ACAD	ACAD-2018-09-21-C-15.00	9/20/2018	12:24:56 PM	STRADDLE	1	4.95	1	0.89	2.9	2.9	N/A	1	0
MDXG	MDXG-2018-10-19-C-7.50	9/21/2018	12:37:09 PM	STRADDLE	2	2.5	0	0	1.1	1.1	N/A	1	0
MDXG	MDXG-2018-10-19-C-9.00	9/21/2018	12:37:09 PM	STRADDLE	11	0.35	0	1.58	0.65	0.65	N/A	0	0