

## MIAX PEARL Appendix A

### Obvious and Catastrophic Errors During Limit and Straddle States

For the month of February 2019, 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
SGMO	SGMO-2019-02-15-C-15.00	02/07/2019	11:00:44 AM	STRADDLE	8	1	0	0	0.15	0.15	N/A	1	0
SGMO	SGMO-2019-02-15-C-16.00	02/07/2019	11:11:15 AM	STRADDLE	1	0.35	0	0.02	0.05	0.05	N/A	1	0
SGMO	SGMO-2019-03-15-C-13.00	02/07/2019	11:11:15 AM	STRADDLE	10	4.5	1.98	0	0.5	0.5	N/A	1	0
SGMO	SGMO-2020-01-17-C-10.00	02/07/2019	11:11:15 AM	STRADDLE	3	6.8	0	0	3.4	3.4	N/A	0	0
SGMO	SGMO-2021-01-15-C-17.00	02/07/2019	11:11:15 AM	STRADDLE	4	7	0	0	3	3	N/A	0	0
SGMO	SGMO-2021-01-15-C-20.00	02/07/2019	11:11:15 AM	STRADDLE	5	8	0	0	2	2	N/A	0	0
PTX	PTX-2019-02-15-C-2.50	02/13/2019	10:08:14 AM	STRADDLE	50	0.05	0	0	0.05	0.05	N/A	0	1
MAT	MAT-2019-03-01-P-15.00	02/15/2019	02:47:50 PM	STRADDLE	2	0.31	0	0	0.3	0.3	N/A	0	0
NKTR	NKTR-2019-02-15-C-42.50	02/15/2019	03:16:58 PM	STRADDLE	1	1.82	0.25	0.09	0.05	0.05	N/A	0	0
PCG	PCG-2019-02-22-P-17.00	02/22/2019	10:00:59 AM	STRADDLE	1	1.61	0	0.61	0.05	0.05	N/A	0	0
PCG	PCG-2019-03-01-P-14.00	02/22/2019	10:01:01 AM	STRADDLE	2	2.59	0	0	0.1	0.1	N/A	0	0
UNIT	UNIT-2019-03-15-P-7.50	02/25/2019	11:22:12 AM	STRADDLE	1	0.49	0	0.03	0.5	0.5	N/A	0	1
UNIT	UNIT-2019-03-15-C-20.00	02/25/2019	01:49:42 PM	STRADDLE	10	1.2	0	0	0.05	0.05	N/A	0	0
CLDX	CLDX-2019-05-17-P-6.00	02/26/2019	10:32:31 AM	STRADDLE	6	1.82	0.49	0	1.55	1.55	N/A	0	0
RIOT	RIOT-2020-01-17-C-5.00	02/27/2019	10:28:05 AM	STRADDLE	10	0.54	88.39	0	0.74	0.74	N/A	0	0