## BATS Exchange, Inc. and EDGX Exchange, Inc. Options Limit Up-Limit Down Assessment November 21, 2016

## **Background**

Bats BZX Exchange, Inc. ("BZX") and Bats EDGX Exchange, Inc. ("EDGX", and together with BZX, the "Exchanges") are Participants in the Plan to Address Extraordinary Market Volatility Pursuant to Rule 608 of Regulation NMS (the "Limit Up-Limit Down Plan" or the "Plan")<sup>1</sup>. On May 8, 2015, BZX implemented Rule 20.6 "Nullification and Adjustment of Options Transactions including Obvious Errors", in coordination with other U.S. options exchanges. An identical Rule 20.6 was adopted in connection with the creation of an options trading platform for EDGX. On November 2, 2015, the EDGX options trading platform was launched.

As part of Rule 20.6, the Exchanges adopted Interpretation and Policy .01 to provide for how the Exchanges will treat Obvious and Catastrophic Errors in response to the Limit Up-Limit Down Plan, which is applicable to all NMS stocks, as defined in Regulation NMS Rule 600(b)(47). Under Interpretation and Policy .01, during a pilot period to coincide with the pilot period for the Plan, including any extensions to the pilot period for the Plan, an execution will not be subject to review as an Obvious Error or Catastrophic Error pursuant to paragraph (c) or (d) of Rule 20.6 if it occurred while the underlying security was in a "Limit State" or "Straddle State," as defined in the Plan.

The purpose of this assessment is to, in connection with assessing the impact of the Obvious Error Rules during Limit States and Straddle States, (1) evaluate the statistical and economic impact of Limit and Straddle States on liquidity and market quality in the options market, and (2) assess whether the lack of obvious error rules in effect during the Straddle and Limit States are problematic.

This assessment includes Exchange data from December 1, 2015 through October 31, 2016 (the "Review Period").

## Data

Data regarding the operation of the Pilot is available at: <a href="http://www.bats.com/us/options/market\_statistics/luld\_reports/">http://www.bats.com/us/options/market\_statistics/luld\_reports/</a>

During the Review Period, the Exchanges received 65 obvious error review requests, none of which were to review a transaction pursuant to Rule 20.6 when the underlying security was in a Limit State or Straddle State. Hereafter, a trade occurring when the underlying security was in a Limit State or Straddle State will be referred to as a "LULD Trade". No obvious error review requests were for LULD Trades.

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Securities Exchange Act Release No. 67091 (May 31, 2012), 77 FR 33498 (June 6, 2012) (order approving the Plan on a pilot basis).

<sup>&</sup>lt;sup>2</sup> 17 CFR 242.600(b)(47).

The Exchanges observed a combined total of 242 LULD Trades accounting for 11,628 contracts in options overlying 72 securities during the Review Period. BZX accounted for 235 trades and 11,484 contacts and EDGX accounted for 7 trades and 144 contracts. LULD Trade volume accounted for 0.0031% of the total volume on BZX (373,196,064 contacts) and for .0005% of the total volume on EDGX (28,536,619 contracts) during the Review Period. Please refer to Appendix A for a summary of LULD Trades and volume per options class during the Review Period.

With regard to price volatility, the Exchanges observed that 106 of the 242 LULD Trades had a price change in an options series of 30% or more during the Limit State or Straddle State compared to the last trade before the Limit State or Straddle State. 116 LULD Trades had a price change in an options series' price move 30% during the five minute period after it exited the Limit State or Straddle State.

## Conclusion

Bats believes, based on the information available during the Review Period, that the pilot does not negatively impact market quality during normal market conditions.

Table 1 LULD Trade Statistics								
	Review Period (12/1/15 – 10/31/16)	Average per Day Review Period	Previous Review Period (6/1/15 - 11/30/15) Excluding 8/24/15	Average per Day Excluding 8/24/15	Previous Review Period (6/1/15 – 11/30/15)	Average per Day Previous Review Period		
Count of LULD Trades	242	1.0	190	1.5	209	1.6		
Executed Volume of LULD Trades	11,628	50.1	7,202	56.7	7,954	62.1		
Price Change Exceeded 30% During Limit or Straddle State <sup>3</sup>	106	.5	60	.5	75	.6		
Option Price within Five Minutes after Leaving Limit State or Straddle State is 30% or More Away <sup>4</sup>	116	.5	22	.2	38	.3		

As compared to the last available option price as reported by OPRA before the start of the Limit or Straddle State.

As compared to the price before the start of the Limit or Straddle State.

Bats believes that there is insufficient data to make a statistical assessment of whether the absence of obvious error rules in effect during Limit and Straddle States are problematic based on the lack of obvious error review requests received during the Review Period.

 $\label{eq:Appendix A - Summary of LULD Trades (BZX and EDGX) } Appendix \ A - Summary \ of \ LULD \ Trades \ (BZX \ and \ EDGX)$ 

Stock Symbol	Total LULD Volume	Total LULD Trades	Avg. Trade Size
ACTG	40	1	40
ALR	40	1	40
APRI	2	1	2
ARLZ	64	2	32
ASFI	20	1	20
AVXL	76	4	19
BIIB	34	6	6
BTU	520	10	52
CACC	2	1	2
CC	38	1	38
СНК	1344	15	90
CLVS	6	2	3
CST	2	1	2
CSTM	8	1	8
CTL	104	6	17
CXW	352	12	29
CY	84	1	84
DATA	26	3	9
DV	28	4	7
EMES	10	1	10
ETE	26	3	9
EXAS	40	2	20
FDC	12	2	6
FEYE	70	2	35
GGP	4	2	2
GLNG	210	5	42
GOGO	20	1	20
GSAT	900	1	900
GWPH	2	1	2
HOG	18	3	6
ICPT	76	5	15
IDTI	196	3	65
LBIO	202	1	202
MDCA	12	1	12
MDVN	68	2	34
MEP	2	1	2
MNTA	40	1	40

Stock Symbol	Total LULD Volume	Total LULD Trades	Avg. Trade Size
NHTC	124	6	21
NXPI	80	9	9
NYMX	600	2	300
ODP	40	1	40
OZRK	170	2	85
P	200	4	50
PANW	40	6	7
PBYI	24	2	12
PETX	2	1	2
POM	82	2	41
POT	992	9	110
PRGO	40	1	40
PTCT	4	1	4
PTLA	2	1	2
QLGC	20	1	20
QUMU	4	1	4
RLYP	564	8	71
SEIC	126	2	63
SIG	78	2	39
SRPT	862	17	51
STRP	20	1	20
SUNE	426	8	53
TEX	124	5	25
TK	2	1	2
TPUB	8	1	8
TRNC	10	1	10
TRUE	4	1	4
TRXC	764	9	85
TWX	8	2	4
VA	12	1	12
VIAB	214	2	107
WLL	454	2	227
WMB	348	7	50
YELP	162	7	23
YHOO	180	1	180