

## QUARTERLY MARKET IMPACT / TRADING PATTERN REPORT – Q4 2018

### PM-SETTLED S&P 500 INDEX OPTIONS

On September 2, 2011, the C2 Options Exchange, Incorporated (“C2”) received approval of a proposed rule change to list and trade PM-Settled S&P 500 Index Options that expire on the third Friday of the month on a 14-month pilot basis. The Chicago Board Options Exchange (“CBOE”) became the sole market for PM-Settled S&P 500 Index Options on February 19, 2013. The pilot program expires on May 6, 2019, unless otherwise extended.

As part of this pilot program, on a periodic basis CBOE will submit reports analyzing volume and open interest for Expiration Friday, PM-Settled S&P 500 Index Option Series (“SPXpm”). Pursuant to the terms of the pilot program, CBOE is submitting this interim report to the SEC.

#### ***Monthly Analysis of Volume & Open Interest:***

This interim pilot report data reflects trading activity in SPXpm options during Q4 2018 (October 1, 2018 through December 31, 2018).

#### ***1. Monthly volume aggregated for all SPXpm trades***

Month	Volume
Oct-18	1,871,858
Nov-18	1,631,950
Dec-18	2,272,716

#### ***2. Monthly volume for SPXpm trades aggregated by expiration date***

Month	Expiration	Volume
Oct-18	October 19, 2018	1,097,873
Oct-18	November 16, 2018	421,326
Oct-18	December 21, 2018	285,745
Oct-18	January 18, 2019	46,994
Oct-18	February 15, 2019	6,224
Oct-18	March 15, 2019	9,962
Oct-18	June 21, 2019	3,734
Nov-18	November 16, 2018	942,451
Nov-18	December 21, 2018	448,008
Nov-18	January 18, 2019	184,148
Nov-18	February 15, 2019	39,405
Nov-18	March 15, 2019	13,964
Nov-18	June 21, 2019	3,974

Month	Expiration	Volume
Dec-18	December 21, 2018	1,569,216
Dec-18	January 18, 2019	405,689
Dec-18	February 15, 2019	181,025
Dec-18	March 15, 2019	85,393
Dec-18	April 18, 2019	4,420
Dec-18	June 21, 2019	26,973

### ***3. Monthly volume for individual SPXpm series***

*See Attached Spreadsheet Tab “SPXpm Monthly Volume by Series”*

### ***4. Month-end open interest aggregated for all SPXpm series***

Month	SPXpm Open Interest
Oct-18	574,497
Nov-18	594,132
Dec-18	436,463

**5. Month-end open interest for SPXpm series aggregated by expiration date**

Month	Expiration	SPXpm Open Interest
Oct-18	November 16, 2018	225,822
Oct-18	December 21, 2018	287,650
Oct-18	January 18, 2019	39,262
Oct-18	February 15, 2019	7,077
Oct-18	March 15, 2019	7,590
Oct-18	June 21, 2019	7,096
Nov-18	December 21, 2018	442,900
Nov-18	January 18, 2019	94,548
Nov-18	February 15, 2019	28,715
Nov-18	March 15, 2019	18,005
Nov-18	June 21, 2019	9,964
Dec-18	January 18, 2019	238,415
Dec-18	February 15, 2019	98,222
Dec-18	March 15, 2019	73,975
Dec-18	April 18, 2019	5,008
Dec-18	June 21, 2019	20,843

**6. Month-end open interest for individual SPXpm series**

*See Attached Spreadsheet Tab “SPXpm Month-end OI by Series”*

***Monthly Analysis of XSP PM Volume & Open Interest:***

***7. Monthly volume aggregated for all XSP PM trades***

<b>Month</b>	<b>XSP Volume</b>
Oct-18	189,729
Nov-18	92,687
Dec-18	143,841

***8. Monthly volume for XSP PM trades aggregated by expiration date***

<b>Month</b>	<b>Expiration</b>	<b>XSP Volume</b>
Oct-18	October 19, 2018	61,413
Oct-18	November 16, 2018	14,239
Oct-18	December 21, 2018	56,115
Oct-18	January 18, 2019	54,781
Oct-18	February 15, 2019	3
Oct-18	March 15, 2019	927
Oct-18	June 21, 2019	739
Oct-18	September 20, 2019	356
Oct-18	December 20, 2019	1,156
Nov-18	November 16, 2018	55,501
Nov-18	December 21, 2018	28,397
Nov-18	January 18, 2019	4,707
Nov-18	February 15, 2019	1,866
Nov-18	March 15, 2019	617
Nov-18	June 21, 2019	581
Nov-18	September 20, 2019	545
Nov-18	December 20, 2019	473
Dec-18	December 21, 2018	62,948
Dec-18	January 18, 2019	5,853
Dec-18	February 15, 2019	68,455
Dec-18	March 15, 2019	2,480
Dec-18	April 18, 2019	24
Dec-18	June 21, 2019	2,069
Dec-18	September 20, 2019	733
Dec-18	December 20, 2019	1,236
Dec-18	December 18, 2020	43

**9. Monthly volume for individual XSP PM series**

*See Attached Spreadsheet Tab “XSP Monthly Volume by Series”*

**10. Month-end open interest aggregated for all XSP PM series**

Month	XSP Open Interest
Oct-18	230,010
Nov-18	191,789
Dec-18	181,709

**11. Month-end open interest for XSP PM series aggregated by expiration date**

Month	Expiration	XSP Open Interest
Oct-18	November 16, 2018	57,956
Oct-18	December 21, 2018	71,034
Oct-18	January 18, 2019	63,942
Oct-18	February 15, 2019	3
Oct-18	March 15, 2019	4,863
Oct-18	June 21, 2019	812
Oct-18	September 20, 2019	547
Oct-18	December 20, 2019	30,853
Nov-18	December 21, 2018	84,039
Nov-18	January 18, 2019	67,315
Nov-18	February 15, 2019	1,826
Nov-18	March 15, 2019	5,126
Nov-18	June 21, 2019	1,354
Nov-18	September 20, 2019	1,079
Nov-18	December 20, 2019	31,050
Dec-18	January 18, 2019	70,078
Dec-18	February 15, 2019	68,737
Dec-18	March 15, 2019	6,632
Dec-18	April 18, 2019	24
Dec-18	June 21, 2019	2,711
Dec-18	September 20, 2019	1,791
Dec-18	December 20, 2019	31,693
Dec-18	December 18, 2020	43

**12. Month-end open interest for individual XSP PM series**

*See Attached Spreadsheet Tab “XSPPM Month-end OI by Series”*