

QUARTERLY MARKET IMPACT / TRADING PATTERN REPORT – Q4 2022

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. Cboe Exchange, Inc. (formerly Chicago Board Options Exchange, Incorporated) (“Cboe Options”) became the sole market for PM-Settled S&P 500 Index Options on February 19, 2013. The Exchange has extended the pilot every six months since then.

As part of this pilot program, on a periodic basis Cboe Options 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 Options 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 2022.

1. Monthly volume aggregated for all SPXpm trades

<u>Month</u>	<u>Index</u>	<u>Volume</u>
22-Oct	SPXW	7,138,700
22-Nov	SPXW	6,626,136
22-Dec	SPXW	6,474,548

2. Monthly volume for SPXpm trades aggregated by expiration date

<u>Month</u>	<u>Index</u>	<u>Expiration</u>	<u>Volume</u>
22-Oct	SPXW	10/21/2022	5,368,994
22-Oct	SPXW	11/18/2022	834,624
22-Oct	SPXW	12/16/2022	554,612
22-Oct	SPXW	1/20/2023	289,312
22-Oct	SPXW	2/17/2023	78,480
22-Oct	SPXW	3/17/2023	12,678
22-Nov	SPXW	11/18/2022	4,626,406
22-Nov	SPXW	12/16/2022	1,201,316
22-Nov	SPXW	1/20/2023	404,882
22-Nov	SPXW	2/17/2023	280,852
22-Nov	SPXW	3/17/2023	107,610
22-Nov	SPXW	4/21/2023	5,070
22-Dec	SPXW	12/16/2022	4,780,094
22-Dec	SPXW	1/20/2023	704,880
22-Dec	SPXW	2/17/2023	517,652
22-Dec	SPXW	3/17/2023	388,918
22-Dec	SPXW	4/21/2023	73,732
22-Dec	SPXW	5/19/2023	9,272

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

<u>Month</u>	<u>Index</u>	<u>OI</u>
22-Oct	SPXW	606,924
22-Nov	SPXW	651,879
22-Dec	SPXW	609,999

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

<u>Month</u>	<u>Index</u>	<u>Expiration</u>	<u>OI</u>
22-Oct	SPXW	11/18/2022	293,345
22-Oct	SPXW	12/16/2022	185,967
22-Oct	SPXW	1/20/2023	93,739
22-Oct	SPXW	2/17/2023	29,850
22-Oct	SPXW	3/17/2023	4,023
22-Nov	SPXW	12/16/2022	365,161
22-Nov	SPXW	1/20/2023	167,510
22-Nov	SPXW	2/17/2023	80,551
22-Nov	SPXW	3/17/2023	37,254
22-Nov	SPXW	4/21/2023	1,403
22-Dec	SPXW	1/20/2023	293,576
22-Dec	SPXW	2/17/2023	173,274
22-Dec	SPXW	3/17/2023	112,155
22-Dec	SPXW	4/21/2023	26,109
22-Dec	SPXW	5/19/2023	4,885

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

<u>Month</u>	<u>Index</u>	<u>Volume</u>
22-Oct	XSP	276,315
22-Nov	XSP	237,797
22-Dec	XSP	268,936

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

See Attached Spreadsheet Tabs “XSP PM Aggreg by Expiration”

9. Monthly volume for individual XSP PM series

See Attached Spreadsheet Tabs “XSP Monthly Volume by Series”

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

<u>Month</u>	<u>Index</u>	<u>OI</u>
22-Oct	XSP	250,791
22-Nov	XSP	244,634
22-Dec	XSP	215,016

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

See Attached Spreadsheet Tabs “XSP PM Aggreg by Expiration”

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

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

Monthly Analysis of MRUT PM Volume & Open Interest:

13. Monthly volume aggregated for all MRUT PM trades

<u>Month</u>	<u>Index</u>	<u>Volume</u>
22-Oct	MRUT	3,558
22-Nov	MRUT	2,274
22-Dec	MRUT	2,911

14. Monthly volume for MRUT PM trades aggregated by expiration date

<u>Month</u>	<u>Index</u>	<u>Expiration</u>	<u>Volume</u>
22-Oct	MRUT	10/21/2022	195
22-Oct	MRUT	11/18/2022	308
22-Oct	MRUT	12/16/2022	2,951
22-Oct	MRUT	1/20/2023	25
22-Oct	MRUT	3/17/2023	43
22-Oct	MRUT	6/16/2023	36
22-Nov	MRUT	11/18/2022	188
22-Nov	MRUT	12/16/2022	1,881
22-Nov	MRUT	1/20/2023	94
22-Nov	MRUT	2/17/2023	5
22-Nov	MRUT	3/17/2023	19
22-Nov	MRUT	6/16/2023	87
22-Dec	MRUT	12/16/2022	2,009
22-Dec	MRUT	1/20/2023	312
22-Dec	MRUT	2/17/2023	302
22-Dec	MRUT	3/17/2023	201
22-Dec	MRUT	6/16/2023	29
22-Dec	MRUT	9/15/2023	58

15. Monthly volume for individual MRUT PM series

See Attached Spreadsheet Tabs “Cboe Monthly Volume by Series”

16. Month-end open interest aggregated for all MRUT PM series

<u>Month</u>	<u>Index</u>	<u>OI</u>
22-Oct	MRUT	2,974
22-Nov	MRUT	3,016
22-Dec	MRUT	797

17. Month-end open interest for MRUT PM series aggregated by expiration date

<u>Month</u>	<u>Index</u>	<u>Expiration</u>	<u>OI</u>
22-Oct	MRUT	11/18/2022	189
22-Oct	MRUT	12/16/2022	2,641
22-Oct	MRUT	1/20/2023	15
22-Oct	MRUT	3/17/2023	89
22-Oct	MRUT	6/16/2023	40
22-Nov	MRUT	12/16/2022	2,720
22-Nov	MRUT	1/20/2023	77
22-Nov	MRUT	2/17/2023	3
22-Nov	MRUT	3/17/2023	94
22-Nov	MRUT	6/16/2023	122
22-Dec	MRUT	1/20/2023	210
22-Dec	MRUT	2/17/2023	188
22-Dec	MRUT	3/17/2023	195
22-Dec	MRUT	6/16/2023	146
22-Dec	MRUT	9/15/2023	58

18. Month-end open interest for individual MRUT PM series

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