



PRELIMINARY

PG48

BULLETIN #148@

E-MINI S&P 500 PUT OPTIONS

wed, Aug 03, 2016

PG48

INDIVIDUAL CONTRACT PRICE DATA FOR OPEN, HIGH, LOW, CLOSE AND SETTLEMENT PLUS CLEARED VOLUME FIGURES REFLECT BOTH CME AND REGULAR TRADING HOURS SESSIONS. VOLUME OR OPEN INTEREST (BOTH BEFORE AND AFTER THE LAST DAY OF TRADING) MAY BE AFFECTED BY: CASH FOR FUTURES, SPREADS, PRIOR DAYS' CLEARED TRADES (OUT-TRADES), POSITION ADJUSTMENTS, OPTIONS EXERCISES, POSITIONS IN DELIVERY, OR POSITIONS IN A CASH SETTLEMENT CYCLE. B=BID A=ASK N=NOMINAL P=POST SETTLEMENT SESSION #=NEW CONTRACT HIGH PRICE *=NEW CONTRACT LOW PRICE R=RECORD VOL OR OPN INT. SETTLEMENT PRICE DETERMINED BY CME RULE 813. B=BID A=ASK N=NOMINAL P=POST SETTLEMENT. CAB= (CABINET TRANSACTION) - 1/2 TICK VALUE = \$12.50 PRODCUT LISTINGS REPRESENT CONTRACTS WITH PRICE/VOLUME ACTIVITY AND/OR HAVE ESTABLISHED OPEN INTEREST. PRODUCTS ELIGIBLE TO TRADE BUT ARE INACTIVE DO NOT APPEAR IN THIS REPORT.

WK EW-W1 E-MINI S&P PUTS													
STRIKE		OPEN	RANGE	HIGH	LOW	CLOSING	RANGE	SETT.PRICE & PT.CHGE.	DELTA	EXER CISES	VOLUME TRADES CLEARED	OPEN INTEREST	--CONTRACT-- HIGH LOW
EOW1	MINI	S&P	P										
AUG16	EOW1	MINI	S&P	P									
1025				----	----	----		CAB	----	----	----	2	UNCH .15 .10A
1250				----	----	----		CAB	----	----	----	400	UNCH .20 .10A
1275				----	----	----		CAB	----	----	----	25	UNCH .10 .10
1375				----	----	----		CAB	----	----	----	12	UNCH .25B .20
1400				----	----	----		CAB	----	----	----	1704	UNCH 1.40 .15A
1440				----	----	----		CAB	----	----	----	50	UNCH 1.55 .20A
1450				----	----	----		CAB	----	----	----	380	UNCH .35 .20
1470				----	----	----		CAB	----	----	----	30	UNCH .35 .20A
1475				----	----	----		CAB	----	----	----	41	UNCH 1.15 .20A
1480				----	----	----		CAB	----	----	----	20	UNCH 1.20 .20A
1490				----	----	----		CAB	----	----	----	20	UNCH 1.25 .20A
1500				----	----	----		CAB	----	----	----	960	UNCH 1.30 .15A
1510	0.20			.20	*.05A	----		CAB	----	----	1	361	UNCH .65 .05A
1525				----	----	----		CAB	----	----	----	209	UNCH 2.65B .25A
1530				----	----	----		CAB	----	----	----	44	UNCH 2.75B .10
1540				----	----	----		CAB	----	----	----	14	UNCH 2.90B .25A
1550				----	----	----		CAB	----	----	----	39	UNCH 3.05B .25A
1560				----	----	----		CAB	----	----	----	18	UNCH 3.25B .20A
1570				----	----	----		CAB	----	----	----	50	UNCH .10 .10
1575				----	----	----		CAB	----	----	----	652	UNCH .50 .10
1580				----	----	----		CAB	----	----	----	95	UNCH .80B .05
1585				----	----	----		CAB	----	----	----	10	UNCH .55B .30A
1590				----	----	----		CAB	----	----	----	184	UNCH .50 .30A
1600				----	----	----		CAB	----	----	----	1373	UNCH 4.25 .05
1610				----	----	----		CAB	----	----	----	460	UNCH .60B .20
1620				----	----	----		CAB	----	----	----	3	UNCH .65B .25A
1625				----	----	----		CAB	----	----	----	19	UNCH 3.55B .15A
1630				----	----	----		CAB	----	----	----	283	UNCH 5.00B .15A
1640				----	----	----		CAB	----	----	----	510	UNCH 1.10B .15
1650				----	----	----		CAB	----	----	----	10115	UNCH 2.20B .05
1660				----	----	----		CAB	----	----	----	656	UNCH .80B .25A
1665				----	----	----		CAB	----	----	----	51	UNCH 4.65B .15
1670				----	----	----		CAB	----	----	----	26	UNCH 6.50 .25
1675				----	----	----		CAB	----	----	----	1020	UNCH .90B .05
1680				----	----	----		CAB	----	----	----	250	UNCH .90B .15A
1690				----	----	----		CAB	----	----	----	55	UNCH 3.65 .10A
1700				----	----	----		CAB	----	----	----	326	UNCH 3.90 .10A
1710				----	----	----		CAB	----	----	----	3740	UNCH 4.00 .05
1715				----	----	----		CAB	----	----	----	137	UNCH 1.55B .10A
1720				----	----	----		CAB	----	----	----	2494	UNCH 7.25 .05
1725				----	----	----		CAB	----	----	----	1518	UNCH 4.60 .10A
1730				----	----	----		CAB	----	----	----	615	UNCH 4.85 .05
1740				----	----	----		CAB	----	----	----	2329	UNCH 10.50B .05
1745				----	----	----		CAB	----	----	----	417	UNCH 5.50 .15A
1750				----	----	----		CAB	----	----	----	15924	UNCH 5.50 .10
1760				----	----	----		CAB	----	----	----	487	UNCH 6.00 .10
1765				----	----	----		CAB	----	----	----	64	UNCH 1.65B .15A
1770				----	----	----		CAB	----	----	----	752	UNCH 6.50 .15A
1775				----	----	----		CAB	----	----	----	23791	UNCH 6.75 .05
1780				----	----	----		CAB	----	----	1	4849	UNCH 2.95 .10
1785				----	----	----		CAB	----	----	----	6155	UNCH 3.20 .10
1790				----	----	----		CAB	----	----	----	178	UNCH 15.25 .15
1795				----	----	----		CAB	----	----	----	398	UNCH 3.00B .10
1800				----	----	----		CAB	----	----	1	18567	- 1 16.00B .05
1805				----	----	----		CAB	----	----	----	106	UNCH 3.20B .05
1810				----	----	----		CAB	----	----	----	17722	UNCH 8.75 .05
1815				----	----	----		CAB	----	----	----	922	UNCH 9.25 .05A
1820				----	----	----		CAB	----	----	----	1253	UNCH 9.50 .05
1825				----	----	----		CAB	----	----	----	2557	UNCH 10.25 .05
1830				----	----	----		CAB	----	----	----	749	UNCH 4.50 .20A
1835				----	----	----		CAB	----	----	----	622	UNCH 4.70 .20
1840				----	----	----		CAB	----	----	----	10251	UNCH 17.50B .05
1845				----	----	----		CAB	----	----	----	899	UNCH 12.25 .15A
1850				----	----	----		CAB	----	----	----	11236	UNCH 7.75B .05
1855				----	----	----		CAB	----	----	----	84	UNCH 13.00 .05
1860				----	----	----		CAB	----	----	----	2950	UNCH 13.75 .10
1865				----	----	----		CAB	----	----	----	8312	UNCH 21.50B .05
1870				----	----	----		CAB	----	----	----	6762	UNCH 26.25B .05
1875				----	----	----		CAB	----	----	----	15213	UNCH 23.25B .05
1880				----	----	----		CAB	----	----	----	323	UNCH 16.25 .15A
1885				----	----	----		CAB	----	----	----	1301	UNCH 25.00B .05
1890				----	----	----		CAB	----	----	----	882	UNCH 26.00B .05
1895				----	----	----		CAB	----	----	----	375	UNCH 12.00B .05
1900				.05B	----	----		CAB	----	----	----	1374	UNCH 17.00B .05
1905	0.10			.10	.05A	----		CAB	----	----	1	3143	UNCH 33.50B .05
1910				----	----	----		CAB	----	----	1	5143	UNCH 20.50 .10A
1915				----	----	----		CAB	----	----	----	3584	UNCH 35.75B .15A
1920				----	----	----		CAB	----	----	----	1415	UNCH 20.50 .05
1925				----	----	----		CAB	----	----	----	1235	UNCH 23.75 .05
1930				----	----	----		CAB	----	----	----	963	UNCH 39.75B .05
1935				----	----	----		CAB	----	----	----	234	UNCH 17.75B .10
1940				----	----	----		CAB	----	----	----	480	UNCH 42.75B .10
1945	0.05			.05	*.05	----		CAB	----	----	84	3374	- 84 19.75B .05
1950	0.05			.05	.05	----		CAB	----	----	44	11827	UNCH 27.00B .05
1955	0.05			.05	*.05	----		CAB	----	----	22	4177	UNCH 43.00B .05
1960	0.10			.10	.05	----		CAB	----	----	77	4312	- 22 44.50B .05
1965	0.05			.05	*.05	----		CAB	----	----	133	2614	- 132 24.00B .05
1970	0.10			.10	.05	----		CAB	----	----	52	2820	- 22 25.25B .05
1975	0.10			.10	.05	----		CAB	----	----	311	3989	- 129 49.75B .05
1980	0.05			.05	*.05	----		CAB	----	----	714	1502	- 274 30.75B .05
1985	0.05			.05	.05	----		CAB	----	.000	602	4638	UNCH 31.25B .05
1990	0.10			.10	*.05	----		CAB	----	.000	887	1778	- 376 30.50B .05
1995	0.10			.10	*.05	----		CAB	----	.000	362	2058	+ 266 61.75B .05
2000	0.10			.10	*.05	----		CAB	----	.000	445	3234	- 167 64.00B .05
2005	----			----	.10A	----		.05-	5	.000	250	778	UNCH 44.25B .10
2010	0.05			.05	*.05	----		.05-	10	.000	200	1019	+ 161 37.00B .05
2015	----			----	.10A	----		.05-	10	.000	301	1573	UNCH 38.75B .05
2020	0.10			.10	.10	----		.05-	10	.000	3	4392	+ 1 40.75B .10
2025	----			----	.10A	----		.05-	10	.000	----	3387	UNCH 42.75B .10
2030	----			----	.10A	----		.10-	5	.001	100	1225	UNCH 44.75B .10
2035	0.10			.10	.10	----		.10-	5	.001	500	1588	+ 490 46.75B .05
2040	0.15			.15	.10A	----		.10-	5	.001	10	3896	UNCH 49.00B .10
2045	0.10			.10	*.10	----		.10-	5	.001	23	1545	- 11 51.25B .10
2050	0.15			.15	.10	----		.10-	5	.001	272	4029	+ 211 53.75B .10
2055	0.10			.10	*.10	----		.10-	5	.001	1	3461	UNCH 56.25B .10
2060	0.20			.20	.10	----		.10-	5	.001	349	4677	+ 121 58.75B .10
2065	0.10			.15	*.10	----		.10-	10	.001	61	3457	+ 41 61.50B .10
2070	0.15			.25B	.15	----		.10-	10	.001	100	2052	- 100 64.50B .15
2075	0.30			.30	*.15	----		.10-	15	.001	920	6492	+ 157 67.50B .15
2080	0.35			.35	.15	----		.15-	15	.002	1582	4161	+ 888 70.50B .15
2085	0.30			.45B	*.15	----		.15-	20	.003	819	4266	+ 368 73.75B .15
2090	0.45			.55B	*.15	----		.15-	25	.003	888	5460	+ 404 77.25B .15
2095	0.70			.70	*.20	----		.20-	30	.005	506	3035	+ 8 80.75B .20
2100	0.75			.95	*.20	----		.20-	40	.005	3705	14843	- 367 82.25B .20
2105	0.85			1.15B	*.25	----		.25-	50	.008	121	4754	+ 8 61.00B .25
2110	1.05			1.50	*.30	----		.35-	60	.012	476	3549	- 138 64.25B .30
2115	1.40			1.95B	*.40	----		.45-	80	.018	1817	3695	+ 83 67.50B .40
2120</													



E-MINI S&P 500 PUT OPTIONS

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PRELIMINARY

PG48		BULLETIN #148@										E-MINI S&P 500 PUT OPTIONS										wed, Aug 03, 2016										PG48	
STRIKE		OPEN		RANGE		HIGH		LOW		CLOSING		RANGE		SETT.PRICE & PT.CHGE.		DELTA		EXER CISES		VOLUME TRADES CLEARED		OPEN INTEREST		--CONTRACT-- HIGH LOW									
EW2 AUG16	MINI	S&P P	EW2	MINI	S&P	P																											
1350							----	----	----	----												427	UNCH	.30	.30								
1380							----	----	----	----												441	UNCH	.30	.30								
1410							----	----	----	----												250	UNCH	.25	.25								
1425							----	----	----	----												459	UNCH	.35	.35								
1430							----	----	----	----												2	UNCH	.35B	.30								
1500							----	----	----	----												30	UNCH	.40	.05								
1510							----	----	----	----												10	UNCH	.30	.30								
1525							----	----	----	----												1180	UNCH	.05	.05								
1575							----	----	----	----												40	UNCH	.75B	.10								
1580							----	----	----	----												20	UNCH	.75B	.05								
1600							----	----	----	----												1132	UNCH	.85B	.10								
1610							----	----	----	----												544	UNCH	.90B	.10								
1620							----	----	----	----												551	UNCH	.95B	.20								
1640							----	----	----	----												7	UNCH	1.10	.25								
1650							----	----	----	----												633	UNCH	1.10B	.05								
1660							----	----	----	----												1205	UNCH	1.20B	.10								
1665							----	----	----	----												22	UNCH	1.20B	.30A								
1670							----	----	----	----												16	UNCH	1.25B	.30A								
1675							----	----	----	----												2084	UNCH	1.30B	.10								
1680							----	----	----	----												239	UNCH	1.35B	.25								
1690							----	----	----	----												2815	UNCH	1.40B	.25								
1700							----	----	----	----												4407	UNCH	1.55	.05								
1710							----	----	----	----												280	UNCH	1.60B	.20A								
1715							----	----	----	----						.000						760	UNCH	1.70B	.20A								
1720							----	----	----	----						.000						488	UNCH	1.75B	.10								
1725	0.05						.05	.05	----	----						.000						1500	6362 +	1500	1.80B	.05							
1730							----	----	----	----						.000						40	UNCH	1.85B	.20								
1740	0.05						.05	*.05	----	----						.000						1802	1982 +	116									

THE INFORMATION CONTAINED IN THIS REPORT IS COMPILED FOR THE CONVENIENCE OF THE USER AND IS FURNISHED WITHOUT RESPONSIBILITY FOR ACCURACY OR CONTENT. IT IS ACCEPTED BY THE USER ON THE CONDITION THAT ERRORS OR OMISSIONS SHALL NOT BE MADE THE BASIS FOR ANY CLAIM, DEMAND, OR CAUSE FOR ACTION.

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PRELIMINARY

PG48		BULLETIN #148@ E-MINI S&P 500 PUT OPTIONS										wed, Aug 03, 2016		PG48	
1410	----	----	----	----		.05	UNCH	.000	----	----		150	UNCH	.10	.10
1510	----	----	----	----		.10	UNCH	.001	----	----		10	UNCH	.30	.20A
1560	----	----	----	----		.15	UNCH	.001	----	----		4	UNCH	.35	.25A
1575	----	----	----	----		.15	UNCH	.001	----	----		40	UNCH	.60	.15A
1580	----	----	----	----		.15	UNCH	.001	----	----		450	UNCH	.60	.15A
1585	----	----	----	----		.15	UNCH	.001	----	----		1	UNCH	.50	.15A
1600	----	----	----	----		.15	UNCH	.001	----	----		945	UNCH	.60	.15A
1610	----	----	----	----		.15	UNCH	.001	----	----		10	UNCH	.30	.15A
1620	----	----	----	----		.15-	5	.001	----	----		155	UNCH	.30	.15A
1625	----	----	----	----		.15-	5	.001	----	----		100	UNCH	.50	.15A
1630	----	----	----	----		.15-	5	.001	----	----		5	UNCH	.25	.20A
1635	----	----	----	----		.15-	5	.001	----	----		10	UNCH	.35B	.20A
1640	----	----	----	----		.15-	5	.001	----	----		15	UNCH	.35B	.20A
1650	----	----	----	----		.15-	5	.001	----	----		810	UNCH	.40	.20
1660	----	----	.20A	----		.15-	10	.002	----	----		99	UNCH	.90	.20A
1665	----	----	.20A	----		.20-	5	.002	----	----		94	UNCH	.90	.20
1670	----	----	----	----		.20-	5	.002	----	----		108	UNCH	.95	.20A
1675	----	----	----	----		.20-	5	.002	----	----		115	UNCH	.95	.20A
1680	----	----	----	----		.20-	5	.002	----	----		54	UNCH	1.00	.20A
1690	----	----	----	----		.20-	5	.002	----	----		180	UNCH	1.05	.20A
1700	0.20	.20	.20	----		.20-	5	.002	----	250		541 +	195	1.05	.20A
1710	0.25	.25	.25	----		.25	UNCH	.003	----	40		104 +	40	1.05B	.25A
1715	----	----	.25A	----		.25-	5	.003	----	----		180	UNCH	.90B	.25A
1720	----	----	.25A	----		.25-	5	.003	----	----		195	UNCH	.90	.25A
1725	----	----	----	----		.25-	5	.003	----	----		74	UNCH	.95B	.25A
1730	----	----	----	----		.25-	5	.003	----	----		251	UNCH	1.00B	.25A
1740	----	----	----	----		.25-	5	.003	----	----		181	UNCH	1.05B	.25A
1745	----	----	----	----		.25-	5	.003	----	----		71	UNCH	1.10B	.25
1750	----	----	----	----		.25-	5	.003	----	----		347	UNCH	1.35B	.30A
1760	----	----	----	----		.25-	5	.003	----	----		32	UNCH	1.50	.30A
1765	----	----	----	----		.30-	5	.004	----	----		50	UNCH	1.20B	.30A
1770	----	----	----	----		.30-	5	.004	----	----		33	UNCH	1.25B	.30A
1775	----	----	----	----		.30-	5	.004	----	----		2	UNCH	1.30B	.30A
1780	----	----	----	----		.30-	5	.004	----	----		3	UNCH	1.85B	.30A
1785	----	.40B	----	----		.30-	5	.004	----	----		55	UNCH	1.40B	.35A
1790	----	----	----	----		.35-	5	.005	----	----		65	UNCH	1.70	.35A
1795	----	----	----	----		.35-	5	.005	----	----		66	UNCH	1.75	.35A
1800	----	----	----	----		.35-	5	.005	----	----		350	UNCH	1.85B	.35A
1805	----	----	----	----		.40-	5	.006	----	----		11	UNCH	1.55B	.35A
1810	----	----	----	----		.40-	5	.006	----	----		13	UNCH	1.95B	.40A
1815	----	.50B	----	----		.40-	5	.006	----	----		64	UNCH	1.95B	.40A
1820	----	----	.45A	----		.45-	5	.007	----	----		22	UNCH	1.75B	.35A
1825	----	----	----	----		.45-	5	.007	----	----		13	UNCH	2.50B	.40A
1830	----	.55B	----	----		.45-	5	.007	----	----		912	UNCH	1.85B	.40A
1835	0.55	.55	.50A	----		.50-	5	.008	----	2		258 +	2	2.35	.45A
1840	0.55	.60B	.55	----		.50-	5	.008	----	2		86 +	1	2.25B	.45A
1845	----	----	.55A	----		.55-	5	.009	----	----		188	UNCH	2.05B	.45A
1850	0.55	.65B	.55	----		.55-	5	.009	----	6		110 +	6	2.85B	.45A
1855	----	.65B	----	----		.55-	5	.009	----	----		253	UNCH	2.70	.50A
1860	----	.70B	.60A	----		.60-	5	.010	----	----		69	UNCH	2.25B	.50A
1865	----	.70B	.60A	----		.60-	5	.010	----	----		357	UNCH	3.35B	.50A
1870	----	.75B	.65A	----		.60-	10	.010	----	----		248	UNCH	2.40B	.50A
1875	----	.80B	.65A	----		.65-	5	.011	----	----		83	UNCH	2.50B	.55A
1880	----	.80B	.70A	----		.65-	10	.011	----	----		133	UNCH	3.20B	.55A
1885	----	.85B	.70A	----		.70-	5	.012	----	----		212	UNCH	3.15B	.60A
1890	----	.90B	.75A	----		.70-	10	.013	----	----		269	UNCH	2.80B	.60A
1895	----	.90B	.75A	----		.75-	10	.013	----	----		314	UNCH	3.50	.60A
1900	----	.95B	.80A	----		.75-	10	.014	----	1		722 +	1	4.15B	.65A
1905	----	1.00B	.80A	----		.80-	10	.015	----	----		191	UNCH	3.65B	.65A
1910	----	1.05B	.85A	----		.80-	15	.015	----	----		280	UNCH	3.80B	.70A
1915	----	1.10B	.90A	----		.85-	15	.016	----	----		648	UNCH	3.95B	.75A
1920	----	1.15B	.95A	----		.90-	15	.017	----	----		146	UNCH	4.05B	.75A
1925	1.00	1.20B	.95A	----		.90-	20	.017	----	11		159 +	10	4.25B	.80A
1930	----	1.25B	1.00A	----		.95-	25	.019	----	----		614	UNCH	4.40B	.85A
1935	1.10	1.35B	1.05A	----		1.00-	25	.020	----	10		197 +	10	4.55B	.85A
1940	----	1.40B	1.10A	----		1.05-	25	.021	----	----		671	UNCH	4.75B	.90A
1945	----	1.50B	1.15A	----		1.10-	30	.022	----	----		271	UNCH	4.95B	.95A
1950	----	1.60B	1.20A	----		1.15-	35	.023	----	----		230	UNCH	5.50B	1.00
1955	1.35	1.70B	1.25A	----		1.20-	35	.025	----	3		275 +	1	4.65B	1.05A
1960	----	1.80B	1.30A	----		1.25-	40	.026	----	----		97	UNCH	4.85B	1.10A
1965	1.60	1.90B	1.35A	----		1.35-	40	.028	----	2		283 +	2	5.75B	1.15A
1970	2.00	2.00	1.45A	----		1.45-	35	.030	----	10		279 +	10	6.00B	1.20A
1975	----	2.15B	1.50A	----		1.50-	40	.032	----	----		204	UNCH	6.25B	1.30A
1980	----	2.25B	1.60A	----		1.55-	45	.033	----	1		260 +	1	7.00B	1.35A
1985	----	2.45B	1.65A	----		1.65-	50	.036	----	----		210	UNCH	6.75B	1.40A
1990	2.10	2.60B	1.75A	----		1.75-	50	.038	----	2		267 +	1	6.25B	1.50A
1995	----	2.75B	1.85A	----		1.85-	50	.041	----	2		159	UNCH	7.50B	1.55A
2000	2.25	2.95B	1.95A	----		1.95-	55	.043	----	45		562 +	19	8.50	1.65A
2005	----	3.10B	2.10A	----		2.10-	55	.047	----	----		396	UNCH	8.75	1.75A
2010	2.60	3.35B	2.25A	----		2.25-	55	.050	----	32		503 +	32	10.75B	1.85A
2015	----	3.55B	2.35A	----		2.40-	60	.054	----	----		271	UNCH	9.75B	2.00A
2020	3.10	3.80B	2.55A	----		2.55-	65	.058	----	2		561 +	1	11.50B	2.10
2025	----	4.05B	2.70A	----		2.70-	70	.062	----	2		286 +	2	12.00B	2.25A
2030	3.35	4.40B	2.90A	----		2.90-	75	.067	----	10		328 +	10	11.25B	2.40A
2035	----	4.70B	3.10A	----		3.10-	80	.072	----	5		490	UNCH	10.75B	2.55
2040	----	5.00B	3.30A	----		3.35-	80	.077	----	1		269 +	1	11.50	2.70A
2045	----	5.25B	3.55A	----		3.60-	85	.084	----	----		738	UNCH	12.00B	2.90A
2050	----	5.75B	3.80A	----		3.90-	90	.091	----	1		1096 -	1	15.25B	3.05A
2055	----	6.00B	4.10A	----		4.20-	90	.098	----	4		367 +	4	14.25	3.25A
2060	5.25	6.50B	4.40A	----		4.55-	95	.106	----	1		431 +	1	16.75B	3.45A
2065	5.50	7.00B	4.75A	----		4.90-	100	.115	----	115		247 +	70	15.75	3.70A
2070	6.25	7.50B	5.25A	----		5.30-	110	.125	----	32		1101	UNCH	19.75B	4.00A
2075	6.75	8.25B	5.75A	----		5.80-	110	.136	----	22		373 +	20	16.50B	4.25A
2080	8.00	8.75B	6.00	----		6.30-	110	.147	----	48		1146 +	3	17.25B	4.55A
2085	7.75	9.75B	6.50A	----		6.80-	120	.159	----	37		139 +	37	18.25B	4.85A
2090	----	10.50B	7.25A	----		7.30-	140	.172	----	8		1077 -	8	20.50B	5.25
2095	----	11.25B	7.75A	----		7.90-	150	.186	----	----		480	UNCH	20.25B	5.75A
2100	10.50	12.25B	8.25	----		8.60-	160	.202	----	34		935	UNCH	26.75B	6.00
2105	10.25	13.00B	9.25A	----		9.30-	180	.219	----	29		201 +	4	22.75B	6.75A
2110	13.00	14.25B	10.00A	----		10.10-	190	.237	----	46		282 +	26	24.00B	7.25
2115	15.50	15.50	10.75A	----		10.90-	210	.256	----	41		180 -	31	25.50B	7.75A
2120	15.75	16.50B	11.75A	----		11.90-	220	.278	----	2		620	UNCH	28.00B	8.50
2125	17.00	18.00B	12.75A	----		12.90-	240	.301	----	29		658 +	5	28.50B	9.00A
2130	16.75	19.25B	14.00A	----		14.00-	260	.326	----	8		209 +	1	37.00B	9.75A
2135	18.75	21.00B	15.25A	----		15.30-	270	.353	----	5					



PRELIMINARY

PG48		BULLETIN #148@										E-MINI S&P 500 PUT OPTIONS										wed, Aug 03, 2016				PG48	
925	----	----	----	----	----							CAB	----	----	----	----	----	209	UNCH	6.75B	.15A						
950	----	----	----	----	----							CAB	----	----	----	----	----	640	UNCH	7.50B	.10						
975	----	----	----	----	----							CAB	----	----	----	----	----	3463	UNCH	8.50B	.10						
1000	----	----	----	----	----							CAB	----	----	----	----	----	1751	UNCH	9.50B	.10						
1025	----	----	----	----	----							CAB	----	----	----	----	----	3610	UNCH	10.50B	.10						
1050	----	----	----	----	----							CAB	----	----	----	----	----	3813	UNCH	11.75B	.05						
1075	----	----	----	----	----								.05	UNCH	.000	----	----	2359	UNCH	13.00B	.05						
1100	----	----	----	----	----								.05	UNCH	.000	----	----	4183	UNCH	14.50B	.05						
1125	----	----	----	----	----								.05	UNCH	.000	----	----	2237	UNCH	16.00B	.05						
1150	----	----	----	----	----								.05	UNCH	.000	----	----	2798	UNCH	17.50B	.05						
1175	----	----	----	----	----								.05	UNCH	.000	----	----	6260	UNCH	19.50B	.05						
1200	----	----	----	----	----								.05	UNCH	.000	----	----	7043	UNCH	21.25B	.05						
1225	----	----	----	----	----								.05	UNCH	.000	----	----	3096	UNCH	23.25B	.05						
1250	0.05	.05	.05	----	----								.05	UNCH	.000	----	3	1655	UNCH	25.50B	.05						
1275	----	----	----	----	----								.05-	5	.000	----	----	2492	UNCH	28.00B	.10						
1300	0.05	.05	*.05	----	----								.10	UNCH	.000	----	11	9781 -	2	30.50B	.05						
1325	0.05	.10	*.05	----	----								.10	UNCH	.000	----	671	3172 +	410	33.25B	.05						
1350	0.10	.10	.10	----	----								.15	UNCH	.001	----	500	5115 +	500	36.00B	.10						
1375	0.10	.10	*.10	----	----								.15	UNCH	.001	----	500	4759	UNCH	39.25B	.10						
1380	----	----	----	----	----								.15	UNCH	.001	----	----	722	UNCH	2.00	.15						
1400	0.15	.15	.15	----	----								.15	UNCH	.001	----	5	10080 -	5	42.50B	.15						
1410	----	----	.15A	----	----								.15-	5	.001	----	----	2632	UNCH	44.00B	.15						
1420	0.20	.20	*.15	----	----								.20	UNCH	.001	----	10	4315 -	10	45.25B	.15						
1425	----	----	----	----	----								.20	UNCH	.001	----	----	855	UNCH	46.00B	.15A						
1430	----	----	----	----	----								.20	UNCH	.001	----	----	583	UNCH	46.75B	.15						
1440	0.15	.15	*.15	----	----								.20	UNCH	.001	----	2	1128	UNCH	48.25B	.15						
1450	----	----	----	----	----								.20	UNCH	.001	----	400	5030 +	200	50.00B	.25						
1460	0.20	.20	.20	----	----								.20-	5	.001	----	500	1369 +	223	51.50B	.20A						
1470	----	----	----	----	----								.20-	5	.002	----	----	1441	UNCH	53.25B	.20A						
1475	----	----	----	----	----								.20-	5	.002	----	----	4349	UNCH	54.00B	.20A						
1480	----	----	----	----	----								.25	UNCH	.002	----	----	802	UNCH	54.75B	.35						
1490	0.20	.20	*.20	----	----								.25	UNCH	.002	----	2	4723 -	2	56.50B	.20						
1500	0.25	.25	.25	----	----								.25-	5	.002	----	5	10856 +	5	58.25B	.25A						
1510	0.25	.25	.25	----	----								.25-	5	.002	225	4689	UNCH	60.25B	.25A							
1520	----	----	----	----	----								.25-	5	.002	----	----	3693	UNCH	62.00B	.30A						
1525	----	----	----	----	----								.25-	5	.002	----	----	2991	UNCH	63.00B	.30A						
1530	----	----	----	----	----								.30	UNCH	.003	----	----	1692	UNCH	64.00B	.20						
1540	0.35	.35	.30	----	----								.30-	5	.003	----	325	3609 -	300	66.00B	.30A						
1550	0.40	.40	.35	----	----								.30-	5	.003	1264	16006 +	761	68.00B	.30A							
1560	----	----	----	----	----								.30-	5	.003	----	----	1238	UNCH	70.00B	.35A						
1570	----	----	----	----	----								.35-	5	.003	----	----	1251	UNCH	72.00B	.35A						
1575	----	----	----	----	----								.35-	5	.003	----	----	8074	UNCH	73.25B	.35						
1580	----	----	----	----	----								.35-	5	.003	10	2197 -	10	74.25B	.35A							
1585	----	----	----	----	----								.35-	5	.003	----	----	630	UNCH	13.75B	.35A						
1590	----	----	.40A	----	----								.40-	5	.004	----	----	1599	UNCH	76.50B	.35A						
1600	0.45	.45	.45	----	----								.40-	5	.004	13	18013 -	12	78.75B	.35							
1610	----	----	.45A	----	----								.45-	5	.004	----	----	1356	UNCH	81.25B	.40A						
1620	----	----	----	----	----								.45-	5	.005	----	----	1238	UNCH	83.50B	.40A						
1625	----	----	----	----	----								.50	UNCH	.005	----	----	7795	UNCH	84.75B	.40A						
1630	0.50	.50	.50	----	----								.50-	5	.005	1	1733 +	1	86.00B	.45							
1635	----	----	----	----	----								.50-	5	.005	----	----	230	UNCH	1.05B	.45A						
1640	----	----	----	----	----								.50-	5	.005	----	----	907	UNCH	88.50B	.45A						
1650	0.55	.55	.50	----	----								.55	UNCH	.006	----	438	25636 +	197	91.25B	.45						
1660	0.60	.60	.60	----	----								.60	UNCH	.006	----	1	1242 +	1	94.00B	.50						
1665	----	----	.60A	----	----								.60-	5	.006	----	----	1433	UNCH	19.50B	.50A						
1670	----	----	----	----	----								.60-	5	.007	----	----	4792	UNCH	96.75B	.55A						
1675	0.65	.65	.65	----	----								.60-	10	.007	----	21	2986	UNCH	98.00B	.55A						
1680	----	----	.65A	----	----								.65-	5	.007	----	----	2989	UNCH	99.50B	.55A						
1690	0.70	.																									



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PRELIMINARY

PG48	BULLETIN #148@				E-MINI S&P 500 PUT OPTIONS				wed, Aug 03, 2016				PG48	
2085	18.00		19.25B	15.00A	----	15.30-	170	.235	----	303	2307 +	119	130.50B	11.75
2090	18.25		20.00B	15.75A	----	16.10-	180	.248	----	469	4499 +	125	314.75B	12.50A
2095	21.25		21.25	16.75A	----	16.90-	200	.261	----	89	2048 +	41	135.75B	13.00A
2100	20.50		22.25B	17.50	----	17.80-	210	.274	----	1078	20089 +	30	323.25B	13.50
2105	22.25		23.50B	18.50	----	18.80-	220	.289	----	206	1068 +	48	141.25B	14.50A
2110	24.50		24.75B	19.50	----	19.90-	220	.305	----	303	2308 +	206	307.50B	15.00
2115	24.50		26.00B	20.50A	----	21.00-	230	.321	----	227	1784 +	98	147.00B	16.00A
2120	25.00		27.25B	21.75	----	22.20-	240	.338	----	332	3215 +	124	314.75B	17.00A
2125	26.50		28.75B	23.00A	----	23.40-	260	.356	----	260	5121 +	232	318.25B	18.00A
2130	28.00		30.25B	24.25A	----	24.70-	270	.375	----	97	2055 +	54	322.00B	19.00A
2135	31.00		32.00B	25.75A	----	26.10-	280	.394	----	109	1493 +	67	159.50B	20.00
2140	33.50		33.75B	27.00	----	27.60-	290	.415	----	144	2168 +	52	329.50B	21.00A
2145	35.50		35.50	28.75A	----	29.20-	300	.436	----	130	1927 +	63	166.00B	22.25A
2150	34.75		37.50	30.25A	----	30.80-	320	.459	----	1167	9357 +	269	337.00B	23.50
2155	34.75		39.25B	32.00A	----	32.50-	340	.482	----	322	1573 +	60	172.75B	25.00
2160	40.50		41.50B	34.00A	----	34.40-	350	.507	----	105	2725 +	86	344.75B	26.00
2165	39.00		43.75B	36.00A	----	36.40-	360	.532	----	162	2391 +	90	179.25B	28.00
2170	43.00		46.00B	38.00A	----	38.50-	380	.558	----	11	1183 -	1	352.75B	29.50
2175	40.50		48.75B	40.25A	----	40.80-	380	.585	----	12	452 -	1	356.75B	31.50A
2180	46.50		51.50B	42.75	----	43.30-	390	.613	----	23	858 -	15	360.75B	33.00
2185	----		54.25B	45.25A	----	45.90-	400	.641	----	31	783 +	31	175.00B	35.50A
2190	----		57.25B	48.00A	----	48.60-	410	.669	----	1	111	UNCH	368.50B	37.75A
2195	----		60.50B	51.00A	----	51.60-	410	.697	----	----	46	UNCH	166.50B	40.00A
2200	62.00		63.75B	54.25A	----	54.70-	420	.726	----	6	927 -	5	376.75B	42.50A
2205	----		66.25B	57.50A	----	58.00-	430	.753	----	31	705 +	31	174.25B	45.25A
2210	----		----	61.00A	----	61.40-	440	.781	----	----	29	UNCH	385.25B	48.00A
2220	----		73.50B	----	----	68.80-	440	.830	----	----	23	UNCH	372.25B	54.25A
2225	----		77.75B	----	----	72.80-	440	.852	----	----	31	UNCH	376.50B	57.75A
2230	----		----	----	----	77.00-	440	.872	----	----	87	UNCH	380.75B	61.25A
2235	----		----	----	----	81.30-	440	.890	----	----	1	UNCH	165.50B	72.75A
2240	----		----	----	----	85.70-	450	.905	----	----	8	UNCH	381.50B	85.75A
2250	----		----	----	----	94.90-	440	.930	----	----	244	UNCH	377.25B	87.25
2260	----		----	----	----	104.30-	450	.948	----	----	1	UNCH	359.25B	127.25A
2270	----		----	----	----	114.00-	440	.960	----	----	1	UNCH	367.25B	104.75
2275	----		----	----	----	118.90-	440	.964	----	----	13	UNCH	349.50B	141.75A
2280	----		----	----	----	123.80-	440	.967	----	----	1	UNCH	353.75B	146.50A
2300	----		----	----	----	143.50-	440	.977	----	----	7	UNCH	500.50B	139.50
2550	----		----	----	----	393.00-	430	.999	----	----	1	UNCH	476.50	476.50
TOTAL										30267	828738 +	6893		
DEC16	EMINI	S&P	PUT											
800	----		----	----	----	.15	UNCH	.000	----	----	5357	UNCH	5.25B	.20
825	----		----	----	----	.20	UNCH	.000	----	----	799	UNCH	5.75	.20A
850	0.20	.20	*.20	----	----	.20	UNCH	.000	----	1	685	UNCH	6.50B	.20
875	----		----	----	----	.25	UNCH	.001	----	----	957	UNCH	7.50B	.50A
900	0.25	.25	*.25	----	----	.25-	5	.001	----	14	1021 +	14	8.25B	.25
925	----		----	----	----	.30	UNCH	.001	----	----	873	UNCH	9.25B	.35
950	----		----	----	----	.35	UNCH	.001	----	----	274	UNCH	10.50	.45A
975	----		----	----	----	.40	UNCH	.001	----	----	1314	UNCH	11.50B	.45
1000	----		.45A	----	----	.45-	5	.002	----	----	2189	UNCH	12.75B	.45
1025	----		.50A	----	----	.50-	5	.002	----	----	453	UNCH	14.00B	.45A
1050	----		.55A	----	----	.55-	5	.002	----	----	1446	UNCH	15.50B	.50
1075	----		.60A	----	----	.60-	5	.003	----	----	1018	UNCH	17.25B	.60
1100	----		.70A	----	----	.70-	5	.003	----	----	3245	UNCH	18.75B	.65
1125	----		*.75A	----	----	.75-	5	.003	----	----	721	UNCH	20.75B	.75A
1150	----		*.80A	----	----	.80-	10	.004	----	----	163	UNCH	22.75B	.80A
1175	----		.90A	----	----	.90-	10	.004	----	----	325	UNCH	24.75B	.90A
1200	1.00	1.00	.95A	----	----	1.00-	10	.005	----	275	2379 +	60	27.00B	.95A
1225	1.10	1.10	1.05	----	----	1.10-	10	.006	----	31	516 -	14	29.50B	1.05A
1250	----		1.20A	----	----	1.20-	10	.006	----	----	1048	UNCH	32.00B	1.15A
1275	----		1.35A	----	----	1.35-	10	.007	----	----	1857	UNCH	35.00B	1.15
1300	----		1.50A	----	----	1.50-	10	.008	----	100	3719 +	10	38.25	1.40A
1325	----		1.70A	----	----	1.65-	15	.009	----	----	2047	UNCH	41.00B	1.55A
1350	----		1.90A	----	----	1.85-	15	.010	----	----	4635	UNCH	44.50	1.70A
1375	----		2.10A	----	----	2.10-	10	.012	----	----	586	UNCH	48.25B	1.90A
1400	----		2.35A	----	----	2.30-	20	.013	----	4000	7229 +	2487	52.00B	2.10A
1410	----		2.45A	----	----	2.45-	15	.014	----	----	5757	UNCH	38.75B	2.20A
1420	----	2.75B	2.55A	----	----	2.55-	15	.015	----	----	1043	UNCH	40.00B	2.30A
1425	----		2.60A	----	----	2.60-	20	.015	----	----	2241	UNCH	56.25B	2.35A
1430	----		2.65A	----	----	2.65-	20	.015	----	----	275	UNCH	57.00B	2.40A
1440	----	3.00B	2.80A	----	----	2.75-	20	.016	----	----	1730	UNCH	58.75B	2.50A
1450	2.90	3.15B	2.90	----	----	2.90-	20	.017	----	1	1604 +	1	60.50B	2.60A
1460	3.30	3.30	3.05A	----	----	3.05-	20	.018	----	207	506 +	66	62.25B	2.75A
1470	----	3.45B	3.15A	----	----	3.15-	25	.019	----	----	616	UNCH	64.25B	2.85
1475	----	3.50B	3.25A	----	----	3.25-	20	.019	----	----	974	UNCH	65.25B	2.90A
1480	----	3.60B	3.30A	----	----	3.30-	25	.020	----	----	755	UNCH	66.25B	3.00A
1490	----	3.75B	3.45A	----	----	3.45-	25	.021	----	----	246	UNCH	68.25B	3.10A
1500	3.65	3.95B	3.60A	----	----	3.60-	25	.022	2075	10160 +	1949	70.25B	3.25A	
1510	----	4.15B	3.80A	----	----	3.80-	20	.023	----	----	2978	UNCH	72.25B	



CME Group, Inc.
20 South Wacker Drive, Chicago, Illinois 60606-7499.
Customer Service: (312) 930-1000

PRELIMINARY

PG48		BULLETIN #148@		E-MINI S&P 500 PUT OPTIONS		wed, Aug 03, 2016		PG48	
1895	22.50	24.25B	21.75A	----	21.80-	130	.145	----	8
1900	24.00	25.00B	22.25A	----	22.30-	130	.148	----	112
1905	23.50	25.50B	22.75A	----	22.80-	130	.152	----	13
1910	23.75	26.00B	23.25A	----	23.30-	140	.155	----	10
1915	----	26.75B	24.00A	----	23.90-	140	.159	----	147
1920	----	27.25B	24.50A	----	24.50-	140	.163	----	1549
1925	25.75	28.00B	25.00A	----	25.10-	140	.167	----	1773 +
1930	----	28.50B	25.75A	----	25.70-	140	.171	----	213
1935	----	29.25B	26.25A	----	26.30-	140	.175	----	148
1940	27.75	30.00B	27.00A	----	26.90-	150	.180	----	2
1945	----	30.50B	27.50A	----	27.50-	160	.184	----	201
1950	30.00	31.25B	28.00	----	28.20-	160	.188	----	7
1955	----	32.00B	28.75A	----	28.90-	160	.193	----	1
1960	30.50	32.75B	29.50A	----	29.60-	170	.198	----	15
1965	----	33.50B	30.25A	----	30.30-	180	.203	----	93
1970	----	34.25B	31.00A	----	31.00-	190	.207	----	1569
1975	32.00	35.25B	31.75A	----	31.70-	200	.212	----	1
1980	34.50	36.00B	32.50A	----	32.50-	200	.217	----	43
1985	34.50	36.75B	33.25A	----	33.30-	200	.223	----	32
1990	36.00	37.75B	34.00A	----	34.10-	200	.228	----	1
1995	34.75	38.50B	34.75	----	34.90-	200	.234	----	10
2000	39.00	39.50B	35.75A	----	35.70-	210	.239	----	126
2005	38.00	40.50B	36.50A	----	36.60-	210	.245	----	23
2010	38.75	41.50B	37.50A	----	37.50-	210	.251	----	26
2015	39.00	42.50B	38.25A	----	38.40-	210	.257	----	22
2020	----	43.50B	39.25A	----	39.30-	210	.263	----	2224
2025	42.50	44.50B	40.25A	----	40.20-	220	.269	----	402
2030	42.50	45.50B	41.00A	----	41.20-	220	.276	----	20
2035	45.75	46.50B	42.00A	----	42.20-	220	.283	----	577
2040	47.00	47.75B	43.25A	----	43.20-	230	.289	----	36
2045	----	48.75B	44.25A	----	44.20-	240	.296	----	561
2050	47.75	50.00B	45.25A	----	45.30-	240	.303	----	514
2055	49.50	51.25B	46.25A	----	46.40-	250	.310	----	100
2060	----	52.50B	47.50A	----	47.50-	260	.318	----	1
2065	49.50	53.75B	48.50A	----	48.70-	260	.326	----	18
2070	----	55.00B	49.75A	----	49.90-	260	.333	----	1200
2075	52.50	56.25B	51.00A	----	51.10-	270	.341	----	1
2080	----	57.50B	52.25A	----	52.40-	270	.349	----	314
2085	----	59.00B	53.50A	----	53.70-	270	.358	----	249
2090	----	60.50B	55.00A	----	55.00-	280	.366	----	5
2095	----	61.75B	56.25A	----	56.40-	280	.375	----	367
2100	61.50	63.25B	57.50A	----	57.80-	280	.384	----	57
2105	----	65.00B	59.00A	----	59.20-	290	.393	----	93
2110	----	66.50B	60.50A	----	60.70-	290	.402	----	455
2115	----	68.00B	62.00A	----	62.20-	290	.412	----	128
2120	----	69.75B	63.50A	----	63.70-	300	.421	----	1093
2125	----	71.50B	65.00A	----	65.30-	300	.431	----	969
2130	----	73.25B	66.75A	----	66.90-	310	.441	----	932
2135	----	75.00B	68.50A	----	68.50-	320	.452	----	62
2140	----	76.75B	70.00A	----	70.20-	320	.462	----	357
2145	76.75	78.75B	71.75A	----	72.00-	320	.473	----	31
2150	----	80.50B	73.75A	----	73.80-	330	.484	----	50
2155	----	82.50B	75.50A	----	75.70-	330	.495	----	287
2160	79.75	84.50B	77.50A	----	77.60-	340	.506	----	3
2165	----	86.75B	79.50A	----	79.60-	330	.518	----	168
2170	86.00	88.75B	81.50A	----	81.60-	340	.529	----	1
2175	----	91.00B	83.50A	----	83.70-	350	.541	----	632
2180	88.25	93.25B	85.50A	----	85.90-	360	.553	----	2
2185	----	95.75B	87.75A	----	88.10-	370	.566	----	41
2190	----	98.00B	90.00A	----	90.40-	380	.578	----	6
2195	----	100.50B	92.50A	----	92.80-	380	.591	----	4
2200	----	103.00B	94.75A	----	95.20-	390	.604	----	543
2205	----	105.75B	97.25A	----	97.70-	400	.616	----	65
2210	----	108.25B	99.75A	----	100.10-	410	.630	----	7
2220	----	114.00B	105.25A	----	105.50-	410	.656	----	7
2225	----	116.75B	108.00A	----	108.20-	420	.669	----	60
2230	----	119.75B	110.75A	----	111.10-	420	.683	----	9
2240	----	126.00B	117.00A	----	117.10-	420	.709	----	33
2245	----	129.25B	120.25A	----	120.20-	430	.723	----	3
2250	----	132.75B	123.25A	----	123.30-	440	.736	----	11
2260	----	139.50B	130.00A	----	130.00-	460	.762	----	2
2270	----	----	137.00A	----	137.00-	470	.787	----	8
2280	----	----	----	----	144.40-	470	.811	----	6
2290	156.25	156.25	156.25	----	152.20-	460	.833	----	1
2295	----	----	----	----	156.10-	460	.844	----	4
2300	----	----	----	----	160.10-	450	.854	----	1
2315	----	----	----	----	172.70-	450	.881	----	1
2330	----	----	----	----	185.80-	450	.906	----	2
2400	----	----	----	----	251.90-	450	.965	----	500
TOTAL									
MAR17	EMINI S&P PUT	----	*.65A	----	.65-	5	.002	----	14513
800	----	----	*.70A	----	.70-	10	.002	----	285683 +
825	----	----	*.80A	----	.80-	5	.003	----	3825
850	----	----	*.90A	----	.85-	10	.003	----	142
875	----	----	*1.00A	----	.95-	10	.003	----	120
900	----	----	*1.10A	----	1.05-	10	.004	----	12
925	----	----	1.20A	----	1.15-	10	.004	----	12
950	----	----	1.30A	----	1.25-	10	.005	----	156
975	----	----	1.45A	----	1.40-	10	.005	----	160
1000	----	----	1.60A	----	1.55-	10	.006	----	354
1025	----	----	1.75A	----	1.70-	15	.006	----	115
1050	----	----	1.95A	----	1.90-	15	.007	----	389 +
1075	----	----	2.15A	----	2.10-	15	.008	----	100
1100	----	----	2.40A	----	2.30-	20	.009	----	3
1125	----	----	2.65	----	2.55-	20	.010	----	33
1150	2.65	2.65	2.90A	----	2.80-	25	.011	----	3
1175	----	----	3.20A	----	3.10-	25	.013	----	11
1200	----	----	3.50A	----	3.45-	25	.014	----	257 +
1225	----	----	3.85A	----	3.80-	25	.016	----	86
1250	4.10B	4.25A	4.70A	----	4.65-	30	.020	----	439
1275	----	5.25A	5.75A	----	5.60-	30	.024	----	188 +
1300	4.80	5.00B	6.25A	----	6.20-	30	.027	----	30
1325	----	7.00A	7.25A	----	7.10-	30	.031	----	1104
1350	----	8.00A	8.50A	----	8.40-	30	.033	----	798
1375	----	9.25B	9.75B	----	9.60-	60	.043	----	435
1400	----	10.00A	10.50A	----	10.40-	60	.047	----	489
1410	----	11.00A	11.50A	----	11.40-	70	.050	----	138
1420	----	12.50B	13.00B	----	12.40-	80	.055	----	175
1430	----	13.50B	14.00B	----	13.40-	80	.060	----	106
1440	----	14.50B	15.00B	----	14.40-	80	.066	----	851
1450	----	15.25B	16.25B	----	15.50A	----	----	----	3226
1460	----	16.75B	17.25	----	16.00A	----	----	----	72
1470	----	----	----	----	----	----	----	----	149
1475	9.50	10.00B	9.50	----	9.30-	50	.034	----	97
1480	----	----	9.75A	----	9.60-	60	.043	----	77
1490	----	10.75B	11.00A	----	10.00A	60	.045	----	3006
1500	----	11.00	11.25A	----	11.00A	70	.050	----	4129 +
1510	----	12.50B	13.00B	----	12.40-	80	.055	----	71
1520	11.00	13.50B	14.00B	----	13.40-	80	.061	----	20
1525	----	14.50B	15.00B	----	14.40-	80	.066	----	333
1530	----	15.25B	16.25B	----	15.50A	----	----	----	28
1535	----	16.75B	17.25	----	16.00A	----	----	----	548 -
1540	----	----	----	----	----	----	----	----	299
1545	----	----	----	----	----	----	----	----	4258
1550	----	----	----	----	----	----	----	----	699
1555	13.25	14.25B	15.25B	----	15.50A	----	----	----	81 +
1560	13.50	15.50B	16.50B	----	16.00A	----	----	----	351
1565	----	16.75B	17.25	----	16.00A	----	----	----	351
1570	----	----	----	----	----	----	----	----	40
1575	----	----	----	----	----	----	----	----	1203
1580	----	----	----	----	----	----	----	----	162
1585	----	----	----	----	----	----	----	----	100
1590	----	----	----	----	----	----	----	----	60
1595	14.50	15.50B	16.50B	----	16.00A	----	----	----	34
1600	----	16.75B	17.25	----	16.00A	----	----	----	1034
1605	----	----	----	----	----	----	----	----	604 +
1610	----	----	----	----	----	----	----	----	3
1615	----	----	----	----	----	----	----	----	525
1620	----	----	----	----	----	----	----	----	175 +
1625	17.00	17.25	16.00A	----	15.80-	80	.073	----	115



PRELIMINARY

PG48	BULLETIN #148@				E-MINI S&P 500 PUT OPTIONS				wed, Aug 03, 2016				PG48	
1630	----		17.50B	16.25A	----	16.10-	80	.074	----	----	43	UNCH	49.50B	15.00A
1640	----		18.00B	16.75A	----	16.70-	80	.077	----	----	35	UNCH	51.00B	15.50A
1650	----		18.75B	17.50A	----	17.40-	80	.081	----	----	1401	UNCH	52.50B	16.00
1660	----		19.50B	18.00A	----	18.10-	80	.084	----	----	51	UNCH	54.00B	16.75A
1670	----		20.25B	18.75A	----	18.80-	80	.087	----	----	312	UNCH	55.75B	17.25A
1675	----		20.50B	19.00A	----	19.10-	80	.089	----	----	286	UNCH	56.50B	17.75A
1680	----		21.00B	19.50A	----	19.40-	90	.090	----	----	22	UNCH	57.50B	18.00A
1690	----		21.75B	20.25A	----	20.10-	90	.094	----	----	8	UNCH	59.00B	18.50A
1700	----		22.50B	21.00A	----	20.80-	100	.097	----	----	1756	UNCH	61.00B	19.25A
1710	----		23.25B	21.75A	----	21.60-	100	.101	----	----	115	UNCH	62.75B	20.00A
1720	----		24.25B	22.50A	----	22.40-	100	.105	----	----	42	UNCH	64.50B	20.75A
1725	----		24.50B	23.00A	----	22.80-	100	.107	----	----	50	UNCH	65.50B	21.00A
1730	----		25.00B	23.25A	----	23.20-	110	.109	----	----	14	UNCH	66.50B	21.50A
1740	----		26.00B	24.25A	----	24.00-	120	.113	----	----	76	UNCH	68.50B	22.25A
1750	----		27.00B	25.00A	----	24.90-	120	.117	----	----	6970	UNCH	70.50B	23.00A
1760	26.50		28.00B	26.00A	----	25.80-	120	.121	----	20	44	UNCH	72.75B	23.75A
1765	----		28.50B	26.50A	----	26.20-	130	.124	----	----	15	UNCH	47.50B	24.25A
1770	----		29.00B	26.75A	----	26.70-	130	.126	----	----	29	UNCH	75.00B	24.75A
1775	----		29.50B	27.25A	----	27.20-	130	.128	----	----	1030	UNCH	76.00B	25.25A
1780	----		30.00B	27.75A	----	27.70-	130	.131	----	----	375	UNCH	77.25B	25.50A
1785	----		30.50B	28.25A	----	28.20-	130	.133	----	----	44	UNCH	50.75B	26.00A
1790	----		31.00B	28.75A	----	28.70-	130	.136	----	----	590	UNCH	79.50B	26.50A
1795	----		31.50B	29.50A	----	29.20-	130	.138	----	----	54	UNCH	52.50B	27.00A
1800	----		32.25B	30.00A	----	29.70-	140	.141	----	----	5350	UNCH	81.75B	27.50A
1805	30.75		32.75B	30.50A	----	30.20-	150	.143	----	18	36 +	18	62.50B	28.00A
1810	----		33.25B	31.00A	----	30.70-	160	.146	----	----	419	UNCH	84.25B	28.50A
1815	----		34.00B	31.50A	----	31.30-	160	.148	----	----	37	UNCH	64.50B	29.00A
1820	34.50		34.50	32.25A	----	31.90-	160	.151	----	17	35 +	17	87.00B	29.50A
1825	35.50		35.75	32.75A	----	32.50-	160	.154	----	149	810 +	149	88.25B	30.00A
1830	35.75		35.75	33.25A	----	33.10-	160	.157	----	17	54 -	17	89.50B	30.50A
1835	----		36.50B	34.00A	----	33.70-	160	.160	----	----	19	UNCH	91.00B	31.00A
1840	----		37.25B	34.50A	----	34.30-	160	.163	----	----	55	UNCH	92.25B	31.75A
1845	----		37.75B	35.25A	----	34.90-	160	.166	----	----	43	UNCH	93.75B	32.25A
1850	38.25		38.75B	35.75A	----	35.50-	160	.169	----	200	1869 +	100	95.00B	32.75A
1855	----		39.25B	36.50A	----	36.10-	170	.172	----	----	94	UNCH	96.50B	33.25A
1860	----		40.00B	37.00A	----	36.80-	170	.175	----	----	206	UNCH	98.00B	34.00A
1865	----		40.50B	37.75A	----	37.50-	170	.178	----	----	54	UNCH	99.50B	34.50A
1870	----		41.25B	38.50A	----	38.20-	170	.182	----	----	54	UNCH	101.00B	35.25A
1875	----		42.00B	39.25A	----	38.90-	180	.185	----	----	422	UNCH	102.50B	35.75A
1880	----		42.75B	39.75A	----	39.60-	190	.189	----	----	78	UNCH	104.00B	36.50A
1885	----		43.50B	40.50A	----	40.30-	200	.192	----	----	66	UNCH	105.50B	37.00A
1890	----		44.50B	41.25A	----	41.00-	210	.195	----	----	58	UNCH	107.00B	37.75A
1895	----		45.25B	42.00A	----	41.80-	210	.199	----	----	36	UNCH	108.50B	38.50A
1900	----		46.00B	42.75A	----	42.60-	210	.203	----	----	658	UNCH	110.25B	39.25A
1905	----		46.75B	43.50A	----	43.40-	210	.207	----	----	3	UNCH	111.75B	39.75A
1910	----		47.75B	44.25A	----	44.20-	210	.210	----	----	315	UNCH	113.50B	40.50A
1915	----		48.50B	45.25A	----	45.00-	210	.214	----	----	17	UNCH	115.25B	41.25A
1920	----		49.25B	46.00A	----	45.80-	210	.218	----	----	148	UNCH	116.75B	42.00A
1925	----		50.25B	46.75A	----	46.60-	220	.222	----	----	100	UNCH	118.50B	42.75A
1930	----		51.25B	47.50A	----	47.50-	220	.226	----	----	72	UNCH	120.25B	43.50A
1935	----		52.00B	48.50A	----	48.40-	220	.230	----	----	15	UNCH	122.00B	44.25A
1940	----		53.00B	49.25A	----	49.30-	220	.235	----	----	71	UNCH	124.00B	45.00A
1945	----		54.00B	50.25A	----	50.20-	220	.239	----	----	38	UNCH	125.75B	46.00A
1950	----		54.75B	51.00A	----	51.10-	220	.243	----	----	1902	UNCH	127.50B	46.75A
1955	----		55.75B	52.00A	----	52.00-	220	.248	----	----	2	UNCH	129.50B	47.50A
1960	----		56.75B	53.00A	----	52.90-	230	.252	----	----	3	UNCH	131.25B	48.50A
1965	----		57.75B	54.00A	----	53.90-	230	.257	----	----	36	UNCH	133.25B	49.25A
1970	----		59.00B	55.00A	----	54.90-	230	.261	----	----	1027	UNCH	135.25B	50.25A
1975	----		60.00B	56.00A	----	55.90-	230	.266	----	----	41	UNCH	137.25B	51.00A
1980	----		61.00B	57.00A	----	56.90-	230	.271	----	----	9	UNCH	139.25B	52.00A
1985	----		62.00B	58.00A	----	57.90-	230	.275	----	----	100	UNCH	141.25B	53.00A
1990	----		63.25B	59.00A	----	59.00-	230	.280	----	----	65	UNCH	143.25B	54.00A
1995	----		64.25B	60.00A	----	60.10-	230	.286	----	----	31	UNCH	145.25B	54.75A
2000	65.25		65.50B	61.00A	----	61.20-	230	.291	----	1	2133	UNCH	147.50B	55.75A
2005	----		66.75B	62.25A	----	62.30-	230	.296	----	----	213	UNCH	149.50B	56.75A
2010	----		67.75B	63.25A	----	63.40-	230	.301	----	----	92	UNCH	151.75B	58.00A
2015	----		69.00B	64.50A	----	64.50-	240	.306	----	----	1	UNCH	154.00B	59.00A
2020	----		70.25B	65.75A	----	65.70-	240	.312	----	----	341	UNCH	156.25B	60.00A
2025	----		71.50B	66.75A	----	66.90-	240	.317	----	----	288	UNCH	158.50B	61.00A
2030	71.00		72.75B	68.00A	----	68.10-	250	.323	----	2	134 -	2	160.75B	62.25A
2035	----		74.00B	69.25A	----	69.30-	260	.329	----	----	702	UNCH	163.00B	63.25A
2040	70.50		75.50B	70.50	----	70.60-	260	.335	----	1	117	UNCH	165.50B	64.50A
2045	----		76.75B	71.75A	----	71.90-	260	.340	----	----	90	UNCH	167.75B	65.75A
2050	----		78.25B	73.00A	----	73.20-	260	.346	----	----	1079	UNCH	170.25B	66.75A
2055	----		79.50B	74.50A	----	74.50-	260	.353	----	----	13	UNCH	172.75B	68.00A
2060	76.00		81.00B	75.75A	----									



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PG48				BULLETIN #148@				E-MINI S&P 500 PUT OPTIONS				wed, Aug 03, 2016				PG48	
1300	----	----	9.00A	----	8.80-	50	.032	----	----	944	UNCH	24.50	8.75				
1325	----	----	9.75A	----	9.60-	60	.035	----	----	12	UNCH	26.25B	9.50A				
1350	----	11.25B	10.75A	----	10.50-	60	.038	----	----	316	UNCH	29.00	10.00				
1375	----	12.25B	11.75A	----	11.50-	60	.042	----	----	12	UNCH	30.75B	11.25A				
1390	----	----	12.25A	----	12.20-	50	.044	----	----	429	UNCH	32.25B	11.75A				
1400	12.75	13.25B	12.75	----	12.60-	50	.046	----	1	37 +	1	33.25B	12.00A				
1410	----	13.75B	13.25A	----	13.00-	60	.048	----	----	20	UNCH	34.25B	12.50A				
1420	----	14.25B	13.50A	----	13.50-	60	.049	----	----	20	UNCH	35.25B	13.00A				
1425	----	14.50B	13.75A	----	13.70-	60	.050	----	----	21	UNCH	35.75B	13.25A				
1430	----	14.75B	14.00A	----	14.00-	60	.051	----	----	6	UNCH	36.50B	13.25A				
1440	----	15.25B	14.50A	----	14.40-	70	.053	----	----	6	UNCH	37.50B	13.75A				
1450	----	15.75B	15.00A	----	14.90-	70	.055	----	----	22	UNCH	38.75B	14.25A				
1460	----	16.25B	15.50A	----	15.40-	70	.057	----	----	11	UNCH	40.00B	14.75A				
1470	----	16.75B	16.00A	----	16.00-	60	.059	----	----	14	UNCH	41.25B	15.25A				
1475	----	17.25B	16.25A	----	16.20-	70	.060	----	----	1	UNCH	41.75B	15.50A				
1480	----	17.50B	16.75A	----	16.50-	70	.061	----	----	75	UNCH	42.50B	15.75A				
1490	----	18.00B	17.25A	----	17.00-	70	.063	----	----	22	UNCH	43.50B	16.25A				
1500	----	18.75B	17.75A	----	17.60-	70	.065	----	----	455	UNCH	44.75B	16.75A				
1510	----	19.25B	18.50A	----	18.20-	70	.068	----	----	892	UNCH	46.25B	17.25A				
1520	----	20.00B	19.00A	----	18.80-	80	.070	----	----	14	UNCH	47.75B	18.00A				
1525	----	20.25B	19.25A	----	19.10-	80	.071	----	----	41	UNCH	48.25B	18.25A				
1540	----	21.25B	20.25A	----	20.00-	90	.075	----	----	8	UNCH	50.50B	19.00A				
1550	----	22.00B	21.00A	----	20.70-	90	.077	----	----	8	UNCH	52.00B	19.75A				
1560	----	22.75B	21.75A	----	21.40-	90	.080	----	----	5	UNCH	53.50B	20.25A				
1570	----	23.50B	22.25A	----	22.10-	100	.083	----	----	9	UNCH	55.00B	21.00A				
1580	----	24.25B	23.00A	----	22.90-	100	.086	----	----	10	UNCH	56.50B	21.75A				
1600	----	26.00B	24.50A	----	24.40-	110	.092	----	----	1164	UNCH	60.00B	23.25A				
1610	----	26.75B	25.50A	----	25.20-	110	.095	----	----	200	UNCH	61.75B	24.00A				
1620	----	27.75B	26.25A	----	26.00-	110	.098	----	----	1	UNCH	63.50B	24.75A				
1625	----	28.00B	26.75A	----	26.40-	110	.099	----	----	245	UNCH	64.25B	25.00A				
1630	----	28.50B	27.00A	----	26.80-	120	.101	----	----	5	UNCH	65.25B	25.50A				
1640	----	29.50B	28.00A	----	27.70-	120	.104	----	----	5	UNCH	66.75B	26.25A				
1650	----	30.50B	28.75A	----	28.60-	120	.108	----	----	114	UNCH	68.75B	27.00A				
1660	----	31.50B	29.75A	----	29.50-	130	.111	----	----	18	UNCH	70.75B	28.00A				
1670	----	32.50B	30.75A	----	30.50-	130	.115	----	----	35	UNCH	72.75B	28.75A				
1675	----	33.00B	31.25A	----	31.00-	130	.117	----	----	34	UNCH	73.75B	29.25A				
1680	----	33.50B	31.75A	----	31.50-	130	.119	----	----	6	UNCH	74.75B	29.75A				
1700	34.75	36.00	33.75A	----	33.60-	140	.127	----	735	1861 +	735	79.00B	31.75A				
1710	----	36.75B	34.75A	----	34.70-	140	.131	----	----	16	UNCH	81.00B	32.75A				
1720	----	38.00B	36.00A	----	35.80-	150	.136	----	----	7	UNCH	83.25B	33.75A				
1730	37.25	39.25B	37.00A	----	37.00-	150	.140	----	1	12	UNCH	85.50B	34.75A				
1740	----	40.50B	38.25A	----	38.20-	150	.145	----	----	507	UNCH	88.00B	36.00A				
1750	----	41.75B	39.50A	----	39.40-	160	.149	----	----	1359	UNCH	90.25B	37.00A				
1760	----	43.00B	40.75A	----	40.70-	160	.154	----	----	5	UNCH	92.75B	38.25A				
1770	----	44.50B	42.00A	----	41.90-	170	.159	----	----	11	UNCH	95.25B	39.50A				
1775	----	45.25B	42.75A	----	42.60-	170	.162	----	----	201	UNCH	96.50B	40.00A				
1785	----	46.50B	44.00A	----	44.00-	170	.167	----	----	2	UNCH	69.75B	41.25A				
1795	----	48.00B	45.50A	----	45.40-	170	.172	----	----	1	UNCH	80.50B	42.50A				
1800	----	48.75B	46.25A	----	46.10-	170	.175	----	----	1624	UNCH	103.25B	43.25A				
1810	----	50.25B	47.75A	----	47.50-	170	.180	----	----	60	UNCH	106.00B	44.50A				
1850	----	57.00B	54.00A	----	53.80-	180	.204	----	----	215	UNCH	117.75B	50.50A				
1870	----	60.50B	57.25A	----	57.30-	190	.217	----	----	5	UNCH	124.00B	53.50A				
1880	----	62.50B	59.25A	----	59.10-	190	.224	----	----	7	UNCH	127.25B	55.25A				
1900	----	66.25B	62.75A	----	62.80-	200	.238	----	----	1877	UNCH	134.00B	58.75A				
1905	----	67.25B	63.75A	----	63.80-	200	.241	----	----	4	UNCH	135.75B	59.50A				
1910	----	68.50B	64.75A	----	64.80-	200	.245	----	----	4	UNCH	137.50B	60.50A				
1915	----	69.50B	65.75A	----	65.80-	200	.249	----	----	4	UNCH	139.25B	61.50A				
1920	----	70.50B	66.75A	----	66.80-	200	.253	----	----	4	UNCH	141.25B	62.25A				
1925	----	71.50B	67.75A	----	67.80-	200	.256	----	----	25	UNCH	143.00B	63.25A				
1940	----	74.75B	71.00A	----	71.00-	210	.268	----	----	210	UNCH	148.50B	66.25A				
1945	----	76.00B	72.00A	----	72.10-	210	.272	----	----	1	UNCH	150.50B	67.25A				
1950	----	77.25B	73.25A	----	73.20-	210	.276	----	----	388	UNCH	152.50B	68.25A				
1960	----	79.50B	75.50A	----	75.40-	220	.284	----	----	1	UNCH	156.50B	70.25A				
1975	----	83.25B	79.00A	----	79.00-	220	.297	----	----	3	UNCH	162.50B	73.75A				
1980	----	84.50B	80.25A	----	80.20-	220	.302	----	----	2	UNCH	164.50B	74.75A				
1995	----	88.25B	84.00A	----	83.90-	240	.315	----	----	4	UNCH	170.75B	78.25A				
2000	----	89.75B	85.25A	----	85.20-	240	.320	----	----	6723	UNCH	173.00B	79.50A				
2010	----	92.25B	87.75A	----	87.80-	240	.329	----	----	51	UNCH	177.25B	81.75A				
2015	----	93.75B	89.00A	----	89.10-	250	.334	----	----	1	UNCH	179.50B	83.00A				
2020	----	95.25B	90.50A	----	90.50-	250	.339	----	----	424	UNCH	181.75B	84.25A				
2025	----	96.50B	91.75A	----	91.90-	250	.344	----	----	164	UNCH	184.25B	85.50A				
2030	----	98.00B	93.25A	----	93.30-	250	.349	----	----	51	UNCH	186.50B	86.75A				
2040	----	101.00B	96.00A	----	96.10-	250	.359	----	----	115	UNCH	191.25B	89.50A				



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BULLETIN #148@				E-MINI S&P 500 PUT OPTIONS				wed, Aug 03, 2016				PG48	
1525	----	----	----	0.15N	.15	UNCH	.001	----	----	803	UNCH	19.00B	.50A
1530	----	----	----	0.20N	.15-	5	.001	----	----	188	UNCH	19.50B	.30A
1540	----	----	----	0.20N	.15-	5	.001	----	----	61	UNCH	20.25B	.30A
1550	----	----	----	0.20N	.15-	5	.001	----	----	1110	UNCH	21.00B	.15A
1560	----	----	----	0.20N	.15-	5	.001	----	----	274	UNCH	22.00B	.30
1570	----	----	----	0.20N	.15-	5	.001	----	----	253	UNCH	22.75B	.20A
1575	----	----	----	0.20N	.15-	5	.001	----	----	201	UNCH	23.25B	.20
1580	0.15	.15	*.15	0.20N	.15-	5	.001	----	4	175	UNCH	23.75B	.15
1585	----	----	----	0.20N	.15-	5	.001	----	----	2	UNCH	10.75B	.35A
1590	----	----	----	0.20N	.20	UNCH	.002	----	----	371	UNCH	24.75B	.35A
1600	----	----	----	0.20N	.20	UNCH	.002	----	----	819	UNCH	25.75B	.35A
1610	----	----	----	0.20N	.20	UNCH	.002	----	----	330	UNCH	26.75B	.20A
1620	----	----	----	0.25N	.20-	5	.002	----	----	236	UNCH	28.00B	.20A
1625	----	----	----	0.25N	.20-	5	.002	----	----	2293	UNCH	28.50B	.20A
1630	----	----	----	0.25N	.20-	5	.002	----	----	92	UNCH	29.00B	.20A
1640	0.20	.20	.20	0.25N	.20-	5	.002	----	4	312	UNCH	30.25B	.20
1650	----	----	----	0.25N	.20-	5	.002	----	----	1013	UNCH	31.50B	.20
1660	----	----	----	0.25N	.20-	5	.002	----	----	171	UNCH	32.75B	.20
1665	----	----	.25A	0.25A	.25-	5	.003	----	----	213	UNCH	15.75B	.25
1670	0.25	.25	.25	0.25	.25-	5	.003	----	8	428	UNCH	34.00B	.25
1675	----	----	----	0.30N	.25-	5	.003	----	----	701	UNCH	34.75B	.25A
1680	----	----	----	0.30N	.25-	5	.003	----	----	383	UNCH	35.50B	.25A
1690	----	----	----	0.30N	.25-	5	.003	----	----	317	UNCH	36.75B	.30
1700	0.30	.30	.30	0.30	.30-	5	.004	----	4	2256 +	3	38.25B	.30A
1710	----	----	----	0.35N	.30-	5	.004	----	6	8331	UNCH	40.00B	.30A
1715	----	----	----	0.35N	.35	UNCH	.004	----	----	464	UNCH	4.65B	.30A
1720	----	----	----	0.35N	.35	UNCH	.004	----	----	486	UNCH	41.50B	.30A
1725	----	.35A	.35A	0.40N	.35-	5	.004	----	1	298	UNCH	42.25B	.30A
1730	----	----	----	0.40N	.35-	5	.004	----	6	8399	UNCH	43.25B	.35A
1740	0.35	.40	.35	0.40	.40	UNCH	.005	----	2	511 +	1	45.00B	.35
1745	0.40	.40	.40	0.40	.40-	5	.005	----	7	190 -	6	30.00B	.35A
1750	----	----	.40A	0.45N	.40-	5	.005	----	----	1822	UNCH	46.75B	.35
1760	----	----	----	0.45N	.45	UNCH	.006	----	----	900	UNCH	48.50B	.40A
1765	----	----	.45A	0.45A	.45-	5	.006	----	----	291	UNCH	5.25B	.40A
1770	----	----	.45A	0.50N	.45-	5	.006	----	----	923	UNCH	50.50B	.40A
1775	----	----	----	0.50N	.45-	5	.006	----	----	2805	UNCH	51.50B	.40A
1780	----	.50A	0.50A	0.50A	.45-	10	.006	----	----	1284	UNCH	52.50B	.40
1785	----	.50A	0.50A	0.50A	.50-	5	.007	----	----	191	UNCH	8.25	.45A
1790	----	----	----	0.55N	.50-	5	.007	----	----	1967	UNCH	54.50B	.45A
1795	----	.55A	0.55A	0.55A	.50-	10	.007	----	----	224	UNCH	7.75B	.40
1800	----	.55A	0.60N	0.60N	.50-	10	.007	----	----	1804	UNCH	56.75B	.40
1805	----	.60A	0.60A	0.60A	.55-	10	.008	----	----	274	UNCH	8.25B	.50
1810	0.65	.65	.60A	0.60A	.55-	10	.008	----	20	1264	UNCH	59.00B	.50A
1815	----	----	.60A	0.60A	.55-	10	.008	----	----	178	UNCH	32.00B	.50A
1820	----	----	.60A	0.65A	.60-	10	.009	----	----	920	UNCH	61.25B	.50
1825	----	.65A	0.65A	0.65A	.60-	15	.009	----	----	1039	UNCH	62.50B	.55A
1830	0.65	.65	.65	0.70A	.60-	15	.009	----	20	4020	UNCH	63.75B	.55A
1835	----	.70A	0.70A	0.70A	.65-	15	.010	----	----	350	UNCH	43.75B	.55A
1840	----	.70A	0.75A	0.75A	.65-	15	.010	----	----	502	UNCH	66.25B	.60A
1845	----	.75A	0.75A	0.75A	.70-	15	.011	----	----	586	UNCH	45.75B	.60
1850	----	.75A	0.80A	0.80A	.70-	20	.011	----	----	1944	UNCH	69.00B	.65
1855	0.80	.80	.80	0.80	.75-	15	.012	----	494	942 +	494	47.50B	.65A
1860	----	----	.80A	0.85A	.80-	15	.013	----	----	517	UNCH	71.50B	.65A
1865	----	----	.85A	0.90A	.80-	20	.013	----	----	360	UNCH	49.75B	.70A
1870	0.80	.80	.90A	0.90A	.85-	15	.014	----	761	2433 +	704	74.50B	.70
1875	----	----	.90A	0.95A	.90-	15	.015	----	----	2004	UNCH	75.75B	.70
1880	1.00	1.00	.95A	1.00	.90-	20	.015	----	50	754 -	11	77.25B	.75A
1885	----	----	.95A	1.05A	.95-	20	.016	----	1	521 +	1	54.00B	.80A
1890	----	----	1.00A	1.10B	1.00-	20	.017	----	----	993	UNCH	80.25B	.85A
1895	----	----	1.05A	1.10A	1.05-	20	.018	----	----	719	UNCH	56.25B	.85A
1900	1.25	1.35B	1.05A	1.15	1.10-	20	.019	----	55	2022	UNCH	83.25B	.90A
1905	----	1.40B	1.10A	1.20A	1.10-	25	.019	----	----	540	UNCH	58.75B	.95
1910	1.30	1.45B	1.15A	1.30	1.15-	25	.020	----	1	491	UNCH	86.75B	.95A
1915	----	1.50B	1.20A	1.30A	1.20-	25	.021	----	----	646	UNCH	61.25B	1.00
1920	1.40	1.60B	1.25A	1.40B	1.30-	20	.023	----	5	1107	UNCH	90.00B	1.00
1925	1.75	1.75	1.30A	1.45A	1.35-	20	.024	----	29	2653	UNCH	91.75B	1.10A
1930	----	1.75B	1.35A	1.50A	1.40-	25	.025	----	----	471	UNCH	93.75B	1.15A
1935	1.85	1.85	1.40A	1.55A	1.45-	25	.027	----	109	400 -	9	66.75B	1.20A
1940	1.60	1.95B	1.50A	1.65A	1.55-	25	.029	----	17	2993 +	17	97.25B	1.25A
1945	----	2.05B	1.55A	1.75B	1.60-	25	.030	----	----	1646	UNCH	69.50B	1.35A
1950	2.15	2.20B	1.60A	1.80A	1.70-	25	.032	----	56	3940 +	36	101.00B	1.40A
1955	2.20	2.30B	1.70A	1.90A	1.75-	30	.033	----	288	1379 +	60	72.50B	1.45A
1960	----	2.45B	1.75A	2.00A	1.85-	30	.035	----	60	1929 +	60	105.00B	1.50A
1965	2.50	2.60B	1.85A	2.10A	1.95-	30	.037	----	247	1231 +	246	75.75B	1.60A
1970	2.30	2.75B	1.95A	2.20A	2.05-	35	.040	----	15	790	UNCH	109.00B	1.70
1975	2.55	2.90B	2.05A	2.30A	2.15-	35	.042	----	187	1311 +	7	111.25B	1.75A
1980	2.70	3.05B	2.15A	2.45A	2.25-	40	.044	----	175	3505 +	175	113.25B	1.85
1985	2.85	3.25B	2.30A	2.60A	2.40-	40	.047	----	187	1606 +	146	82.25B	1.95A
1990	2.85	3.45B	2.40A	2.70A	2.50-	45	.050	----	82	522 -	42	117.50B	2.05A
1995	3.20	3.65B	2.55A	2.85A	2.65-	50	.053	----	67	425 -	58	86.00B	2.20A
2000	3.10	3.90B	2.70A	3.05A	2.80-	55	.056	----	7950	3679 -	5137	122.25B	2.30A
2005	3.60	4.10B	2.85A	3.20A	2.95-	60	.060	----	32	216 -	12	89.50B</	



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PG48		BULLETIN #148@				E-MINI S&P 500 PUT OPTIONS				wed, Aug 03, 2016				PG48	
1025	----	----	----	----	CAB	----	.000	----	----	1	UNCH	1.40B	.20A		
1050	----	----	----	----	.05+	5	.000	----	----	156	UNCH	1.60B	.20A		
1100	----	----	----	----	.05+	5	.000	----	----	220	UNCH	2.05B	.05		
1125	----	----	----	0.05N	.10+	5	.000	----	----	333	UNCH	2.30B	.20A		
1150	----	.05B	----	0.05B	.10+	5	.000	----	----	630	UNCH	2.60B	.20A		
1175	----	----	----	0.10N	.10	UNCH	.000	----	----	374	UNCH	2.90B	.15		
1200	----	----	----	0.10N	.10	UNCH	.000	----	----	183	UNCH	3.30B	.15		
1225	----	----	----	0.10N	.15+	5	.001	----	----	3900	UNCH	3.70B	.25A		
1250	----	----	----	0.15N	.15	UNCH	.001	----	----	302	UNCH	4.15B	.25A		
1275	----	----	----	0.15N	.15	UNCH	.001	----	----	251	UNCH	4.60B	.35A		
1300	----	----	----	0.20N	.20	UNCH	.001	----	----	764	UNCH	5.00B	.30A		
1325	----	----	----	0.25N	.20-	5	.001	----	----	447	UNCH	5.75B	.35A		
1350	----	----	----	0.25N	.25	UNCH	.002	----	----	355	UNCH	6.25B	.25A		
1375	----	----	----	0.30N	.30	UNCH	.002	----	----	11	UNCH	7.00B	.45A		
1400	----	----	----	0.30N	.30	UNCH	.002	----	----	149	UNCH	8.00B	.35A		
1410	----	----	----	0.35N	.35	UNCH	.003	----	----	196	UNCH	8.25B	.45A		
1420	----	----	----	0.35N	.35	UNCH	.003	----	----	137	UNCH	8.50B	.55A		
1425	----	----	----	0.35N	.35	UNCH	.003	----	----	50	UNCH	8.75B	.40A		
1430	----	----	----	0.35N	.35	UNCH	.003	----	----	14	UNCH	9.00B	.35A		
1440	----	----	----	0.40N	.40	UNCH	.003	----	----	279	UNCH	9.50B	.60A		
1450	----	----	----	0.40N	.40	UNCH	.003	----	----	332	UNCH	9.75B	.45A		
1460	----	----	----	0.40N	.40	UNCH	.003	----	----	264	UNCH	10.25B	.40A		
1470	----	----	----	0.45N	.45	UNCH	.004	----	----	279	UNCH	10.75B	.50A		
1475	----	----	----	0.45N	.45	UNCH	.004	----	----	212	UNCH	11.00B	.50A		
1480	----	----	----	0.45N	.45	UNCH	.004	----	----	103	UNCH	11.25B	.50A		
1490	----	----	----	0.50N	.50	UNCH	.004	----	----	277	UNCH	11.50B	.45A		
1500	----	----	----	0.50N	.50	UNCH	.004	----	----	369	UNCH	12.00B	.50		
1510	----	----	----	0.55N	.55	UNCH	.005	----	----	32	UNCH	12.75B	.50A		
1520	----	----	----	0.60N	.55-	5	.005	----	----	5	UNCH	13.25B	.45		
1525	----	----	----	0.60N	.60	UNCH	.005	----	----	5773	UNCH	13.50B	.55A		
1530	----	----	----	0.60N	.60	UNCH	.005	----	----	978	UNCH	13.75B	.55A		
1540	----	----	----	0.65N	.65	UNCH	.006	----	----	28	UNCH	14.25B	.55A		
1550	----	.65A	0.65A	.65-	.65	5	.006	----	----	994	UNCH	15.00B	.60A		
1560	----	.70A	0.70A	.70-	.70	5	.006	----	----	99	UNCH	15.50B	.60A		
1570	----	----	0.75N	.75	UNCH	.007	.007	----	----	906	UNCH	16.25B	.65A		
1575	----	.75A	0.75A	.75-	.75	5	.007	----	----	82	UNCH	16.50B	.65A		
1580	----	.75A	0.75A	.75-	.75	5	.007	----	----	166	UNCH	17.00B	.65A		
1590	----	.80A	0.80A	.80-	.80	5	.007	----	----	320	UNCH	17.50B	.70A		
1600	0.85	.85	0.85	.85-	.85	5	.008	----	108	837 +	108	18.25B	.75A		
1610	----	.90A	0.90A	.90-	.90	5	.008	----	----	208	UNCH	19.00B	.75A		
1620	----	.95A	0.95A	.95-	.95	5	.009	----	----	209	UNCH	20.00B	.80A		
1625	----	1.00A	1.00A	.95-	.95	10	.009	----	----	970	UNCH	20.25B	.80A		
1630	0.95	.95	0.95	1.00-	1.00	5	.010	----	50	588 +	50	20.75B	.85A		
1640	----	1.05A	1.05A	1.05-	1.05	5	.010	----	----	74	UNCH	21.50B	.90A		
1650	----	1.10A	1.10A	1.10-	1.10	10	.011	----	----	1318	UNCH	22.50B	.95A		
1660	----	1.15A	1.20A	1.15-	1.15	10	.011	----	----	501	UNCH	23.50B	1.00A		
1670	1.20	1.35B	1.20	1.20-	1.20	10	.012	----	60	334 +	59	24.50B	1.05A		
1675	----	1.40B	1.30A	1.25-	1.25	10	.013	----	----	976	UNCH	25.00B	1.05A		
1680	----	----	1.35A	1.30-	1.30	10	.013	----	1	384 -	1	25.50B	1.10A		
1690	1.35	1.50B	1.35	1.35-	1.35	10	.014	----	55	350	UNCH	26.50B	1.15A		
1700	1.60	1.60	1.45A	1.45-	1.45	10	.015	246	2423 +	246	27.50B	1.20A			
1710	----	1.70B	1.55A	1.60A	1.50-	15	.016	----	----	148	UNCH	28.75B	1.30A		
1720	1.65	1.85B	1.65	1.65-	1.60	15	.017	----	2	887 +	2	29.75B	1.35A		
1725	----	1.90B	1.70A	1.75A	1.65-	15	.017	----	2244	UNCH	30.50B	1.40A			
1730	1.80	1.95B	1.70	1.80A	1.70-	15	.018	----	2	280 -	2	31.00B	1.45A		
1740	1.90	2.05B	1.80	1.90B	1.80-	15	.019	----	12	974 +	11	32.25B	1.55A		
1750	----	2.20B	2.00A	2.00A	1.95-	15	.021	----	----	1602	UNCH	33.75B	1.65A		
1760	----	2.35B	2.05A	2.15A	2.05-	20	.022	----	----	392	UNCH	35.00B	1.75A		
1770	----	2.50B	2.20A	2.30A	2.20-	20	.024	----	----	188	UNCH	36.50B	1.85A		
1775	----	2.60B	2.25A	2.35A	2.25-	20	.025	241	1426 -	146	37.25B	1.90A			
1780	----	2.70B	2.35A	2.45B	2.30-	25	.025	----	1084	UNCH	38.00B	1.95A			
1785	----	2.80B	2.40A	2.50B	2.40-	20	.027	----	579	UNCH	14.50B	2.00A			
1790	2.55	2.90B	2.50A	2.60B	2.45-	25	.027	38	356	UNCH	39.50B	2.10A			
1795	2.60	3.00B	2.55	2.70B	2.55-	25	.029	45	169 +	35	15.25B	2.15A			
1800	2.75	3.10B	2.60A	2.75A	2.65-	25	.030	33	858 +	24	41.25B	2.20A			
1805	2.95	3.20B	2.65A	2.85A	2.70-	30	.030	58	180 +	58	16.25B	2.30A			
1810	3.15	3.30B	2.75A	2.95A	2.80-	30	.032	37	212 -	17	42.75B	2.35A			
1815	2.95	3.45B	2.90A	3.05A	2.90-	30	.033	18	158 +	18	22.25B	2.45A			
1820	3.05	3.55B	2.95A	3.15A	3.00-	35	.034	18	335 +	18	44.50B	2.50A			
1825	----	3.65B	3.10A	3.25A	3.10-	35	.035	5	2246	UNCH	45.75	2.60			
1830	3.60	3.80B	3.15A	3.40B	3.20-	35	.037	72	396 -	21	46.50B	2.70A			
1835	3.95	4.00B	3.25A	3.50A	3.30-	40	.038	20	405 -	1	46.75B	2.80A			
1840	----	4.10B	3.40A	3.60A	3.45-	40	.040	1	321	UNCH	48.25B	2.90A			
1845	----	4.25B	3.50A	3.75A	3.55-	40	.041	----	229	UNCH	48.75B	3.00A			
1850	4.40	4.40	3.65A	3.85A	3.70-	40	.043	10	2013	UNCH	50.25B	3.10A			
1855	4.55	4.60B	3.75A	4.00A	3.80-	45	.044	30	254 +	20	50.50B	3.20A			
1860	4.45	4.75B	3.85A	4.10	3.95-	45	.046	80	586 +	60	52.25B	3.30A			
1865	----	4.95B	4.00A	4.30A	4.10-	50	.048	----	181	UNCH	52.75B	3.45A			
1870	4.90	5.00B	4.20A	4.45A	4.25-	50	.050	30	1068 +	20	54.50B	3.55A			
1875	----	5.25B	4.30A	4.60A	4.40-	50	.052	----	450	UNCH	55.50B	3.70A			
1880	4.90	5.50B	4.45A	4.80A	4.55-	55	.054	20	9314 -	20	56.75B	3.85A			
1885	----	5.50B	4.60A	4.95A	4.75-	55	.056	----	507	UNCH	57.25B	4.00A			
1890	----	5.75B	4.80A	5.25A	4.90-	60	.058	1	1921 -	1	59.0				



PRELIMINARY

PG48		BULLETIN #148@										E-MINI S&P 500 PUT OPTIONS										wed, Aug 03, 2016										PG48				
2145	43.50			45.75B	38.75A	40.75A		39.30-	310	.473	----		4	133	-	1	168.50B	31.75A																		
2150	45.00			47.75B	40.50A	42.50A		41.10-	320	.492	----		48	911		UNCH	172.00B	33.25A																		
2155	----			50.00B	42.50A	44.50A		42.90-	340	.513	----		5	146		UNCH	175.50B	34.75A																		
2160	----			52.25B	44.50A	46.75A		44.90-	340	.534	----	----		304		UNCH	179.50B	36.50A																		
2165	----			54.50B	46.50A	48.75A		47.00-	350	.555	----	----		84		UNCH	183.50B	38.25A																		
2170	----			57.00B	48.75A	51.25A		49.20-	360	.577	----	----		187		UNCH	184.50B	40.00A																		
2175	----			59.50B	51.25A	53.50A		51.60-	370	.600	----	----		2411		UNCH	180.50B	42.00A																		
2180	----			62.25B	53.50A	56.00A		54.00-	380	.623	----	----		1		UNCH	178.00B	44.00A																		
2190	----			68.00B	59.00A	61.50A		59.20-	400	.670	----	----		3		UNCH	173.75B	48.25A																		
2195	----			71.25B	61.75A	64.75A		62.10-	410	.694	----	----		10		UNCH	168.75B	50.75A																		
2200	----			74.50B	65.00A	68.00A		65.10-	420	.718	----	----		55		UNCH	167.00B	53.25A																		
2250	----			----	----	108.25N		103.80-	450	.905	----	----		500		UNCH	102.50B	92.50A																		
TOTAL																																				
OCT16																																				
800	----			----	----	0.10N				CAB	----	.000	----			9	UNCH	.65	.35																	
825	----			----	----	0.10N				CAB	----	.000	----			3	UNCH	.70B	.35A																	
850	----			----	----	0.10N				CAB	----	.000	----			7	UNCH	.80B	.35A																	
875	----			----	----	0.10N				CAB	----	.000	----			5	UNCH	.90B	.40A																	
900	----			----	----	0.10N		.05-	5	.000	----	----				7	UNCH	1.00	.20A																	
925	----			----	*.10A	0.10A		.05-	10	.000	----	----				1	UNCH	1.10	.10A																	
950	----			----	.10A	0.10A		.05-	10	.000	----	----				2	UNCH	1.25B	.10																	
975	----			----	----	0.15N		.10-	5	.000	----	----				2	UNCH	1.35B	.15A																	
1000	----			----	----	0.15N		.10-	5	.000	----	----				10	UNCH	1.55B	.35A																	
1025	----			----	----	0.15N		.10-	5	.000	----	----				4	UNCH	1.80B	.20A																	
1050	----			----	----	0.20N		.15-	5	.000	----	----				2	UNCH	2.05B	.25A																	
1100	----			----	----	0.20N		.20	UNCH	.001	----	----				2	UNCH	2.65B	.25																	
1125	----			----	----	0.25N		.20-	5	.001	----	----				255	UNCH	3.00B	.35A																	
1150	----			----	----	0.30N		.25-	5	.001	----	----				306	UNCH	3.40B	.35A																	
1175	----			----	----	0.30N		.25-	5	.001	----	----				517	UNCH	3.80B	.35																	
1200	----			----	----	0.35N		.30-	5	.002	----	----				446	UNCH	4.30B	.35A																	
1225	----			----	----	0.40N		.35-	5	.002	----	----				222	UNCH	4.80B	.35A																	
1250	----			----	.40A	0.40A		.40-	5	.002	----	----				1682	UNCH	5.25B	.35A																	
1275	----			----	----	0.45N		.45	UNCH	.003	----	----				383	UNCH	6.00B	.40A																	
1300	----			----	----	0.50N		.50	UNCH	.003	----	----				124	UNCH	6.75B	.45																	
1325	----			----	----	0.60N		.55-	5	.003	----	----				142	UNCH	7.50B	.50A																	
1375	----			----	----	0.70N		.70	UNCH	.005	----	----				96	UNCH	9.25B	.65A																	
1400	----			----	----	0.80N		.80	UNCH	.005	----	----				1168	UNCH	10.25B	.75A																	
1410	----			----	----	0.85N		.85	UNCH	.006	----	----				2534	UNCH	10.75B	.75A																	
1420	----			----	----	0.90N		.90	UNCH	.006	----	----				26	UNCH	11.00B	.80A																	
1425	----			----	----	0.90N		.90	UNCH	.006	----	----				2843	UNCH	11.25B	.80																	
1430	----			----	.90A	0.90A		.90-	5	.006	----	----				154	UNCH	11.50B	.85A																	
1440	----			----	.95A	0.95A		.95-	5	.007	----	----				102	UNCH	12.00B	.85A																	
1450	----			----	----	1.05N		1.00-	5	.007	----	----				217	UNCH	12.50B	.90A																	
1470	1. 05		1. 10B	1. 05	1.10B	1.10-	10	1.10-	10	.008	----	----	20	447	+	20	13.50B	1.00A																		
1475	----		----	1.15A	1.15A	1.15-	10	1.15-	10	.008	----	----				453	UNCH	13.75B	1.00A																	
1490	----		----	1.25A	1.25A	1.25-	10	1.25-	10	.009	----	----				33	UNCH	14.75B	1.10A																	
1500	----		----	1.30A	1.30A	1.30-	10	1.30-	10	.010	----	----				1559	UNCH	15.25B	1.15A																	
1510	----		----	1.40A	1.40A	1.40-	10	1.40-	10	.010	----	----				13	UNCH	16.00B	1.20A																	
152																																				

PRELIMINARY															
PG48	BULLETIN #148@				E-MINI S&P 500 PUT OPTIONS					Wed, Aug 03, 2016					PG48
2070	----		36.50B	31.75A	33.00A	32.10-	210	.296	----	----	278	UNCH	137.75B	27.25A	
2075	34.75		37.50B	32.75A	34.00A	33.10-	220	.305	----	18	954 -	10	140.50B	28.00A	
2080	----		38.75B	33.75A	35.00A	34.20-	220	.315	----	----	1082	UNCH	143.50B	29.00A	
2085	----		40.00B	34.75A	36.25A	35.30-	220	.325	----	----	59	UNCH	146.25B	30.00A	
2090	----		41.25B	36.00A	37.50A	36.50-	220	.336	----	----	61	UNCH	149.25B	31.00A	
2095	----		42.75B	37.25A	38.75A	37.70-	230	.347	----	----	241	UNCH	152.25B	32.00A	
2100	40.75		44.00B	38.50A	40.00A	38.90-	240	.358	----	25	1152 +	1	155.50B	33.00	
2105	----		45.50B	39.75A	41.25A	40.20-	240	.369	----	----	300	UNCH	158.50B	34.00A	
2110	43.50		47.00B	41.00A	42.50A	41.50-	250	.381	----	51	78 +	51	161.75B	35.25A	
2115	----		48.50B	42.50A	44.00A	42.90-	260	.393	----	----	19	UNCH	165.00B	36.50A	
2120	----		50.00B	43.75A	45.50A	44.30-	270	.406	----	----	12	UNCH	168.25B	37.50A	
2125	48.00		51.75B	45.25A	47.00A	45.80-	280	.418	----	48	511 +	15	171.75B	39.00A	
2130	----		53.25B	46.75A	48.50A	47.30-	290	.432	----	----	15	UNCH	175.25B	40.25A	
2135	49.75		55.25B	48.50A	50.25A	48.90-	300	.445	----	1	56 +	1	174.25B	41.50A	
2140	53.00		57.00B	50.00A	52.00A	50.50-	310	.459	----	45	57 +	45	172.75B	43.00A	
2145	----		58.75B	51.75A	53.75A	52.20-	320	.474	----	----	237	UNCH	176.25B	44.50A	
2150	55.50		60.75B	53.50A	55.50A	54.00-	330	.489	----	1	404	UNCH	179.50B	46.00A	
2155	----		62.75B	55.50A	57.50A	55.90-	330	.504	----	----	2	UNCH	182.75B	47.75A	
2160	----		65.00B	57.50A	59.50A	57.80-	340	.520	----	----	16	UNCH	186.50B	49.25A	
2165	----		67.25B	59.50A	61.50A	59.90-	340	.536	----	----	231	UNCH	190.00B	51.00A	
2170	----		69.50B	61.50A	63.75A	62.00-	350	.552	----	----	11	UNCH	193.50B	53.00A	
2185	----		76.75B	68.25A	70.75A	68.80-	370	.603	----	----	11	UNCH	204.75B	58.75A	
2190	----		79.50B	70.75A	73.25A	71.30-	380	.621	----	----	20	UNCH	208.50B	61.00A	
2200	----		85.00B	76.00A	78.50A	76.60-	390	.656	----	----	31	UNCH	200.50B	65.50A	
2205	----		88.00B	78.75A	81.25A	79.30-	400	.675	----	----	64	UNCH	197.75B	68.00A	
2210	----		91.00B	81.50A	84.25A	82.20-	410	.693	----	----	11	UNCH	197.50B	70.50A	
2220	----		97.50B	88.00A	91.00A	88.30-	430	.729	----	----	40	UNCH	194.50B	75.75A	
2225	----		100.75B	91.25A	94.25A	91.50-	430	.747	----	----	36	UNCH	188.25B	78.75A	
2250	----		----	----	114.00N	109.50-	460	.829	----	----	500	UNCH	120.75B	94.75A	
TOTAL										473	58025 +	332			
NOV16	EOM EMINI S&P P														
800	----		----	----	0.15N	.15	UNCH	.000	----	----	27	UNCH	.95	.40	
825	----		----	----	0.15N	.15	UNCH	.000	----	----	10	UNCH	1.05B	.45	
850	----		----	*.15A	0.15A	.20	UNCH	.000	----	----	331	UNCH	1.15B	.15A	
875	----		----	----	0.20N	.20	UNCH	.000	----	----	3	UNCH	1.30B	.40A	
900	----		----	*.20A	0.20A	.25	UNCH	.001	----	----	7	UNCH	1.45B	.20A	
925	----		----	----	0.25N	.25	UNCH	.001	----	----	10	UNCH	1.60B	.50A	
950	----		----	*.25A	0.25A	.30	UNCH	.001	----	----	6	UNCH	1.80B	.25A	
975	----		----	----	0.30N	.30	UNCH	.001	----	----	6	UNCH	2.05B	.60A	
1000	----		----	*.30A	0.30A	.35	UNCH	.001	----	----	4	UNCH	2.35B	.30A	
1025	----		----	----	0.35N	.40+	5	.002	----	----	3	UNCH	2.65B	.35A	
1050	----		----	----	0.40N	.40	UNCH	.002	----	----	3	UNCH	3.00B	.40A	
1075	----		----	----	0.45N	.45	UNCH	.002	----	----	218	UNCH	3.35B	.65A	
1100	0.55		.55	.50A	0.55	.50	UNCH	.002	----	2	1224 -	2	3.75B	.50	
1150	----		----	----	0.60N	.60	UNCH	.003	----	----	712	UNCH	4.70B	.60A	
1175	----		----	----	0.65N	.65	UNCH	.003	----	----	443	UNCH	5.25B	.65A	
1200	----		----	----	0.75N	.70-	5	.004	----	----	260	UNCH	5.75B	.75A	
1225	----		----	.80A	0.80A	.80-	5	.004	----	----	275	UNCH	6.50B	.80A	
1250	----		----	.90A	0.90A	.90-	5	.005	----	----	41	UNCH	7.00B	.90A	
1275	----		----	1.00A	1.00A	1.00-	5	.006	----	----	272	UNCH	8.00B	.90A	
1300	----		----	1.00A	1.05B	1.10-	5	.006	----	----	5	UNCH	8.75B	1.00A	
1325	----		----	1.20A	1.20A	1.20-	10	.007	----	----	62	UNCH	9.75B	1.10A	
1350	1.45		1.45	1.35A	1.45	1.35-	10	.008	----	2	200	UNCH	10.75B	1.25A	
1375	----		----	1.55A	1.55A	1.50-	15	.009	----	----	305	UNCH	11.75B	1.35A	
1400	----		----	1.70A	1.70A	1.70-	15	.010	----	----	214	UNCH	13.00B	1.55A	
1420	----		----	1.90A	1.90A	1.85-	15	.011	----	----	5	UNCH	14.00B	1.65A	
1425	----		----	1.90A	1.90A	1.90-	15	.012	----	----	52	UNCH	14.25B	1.70A	
1430	----		----	1.95A	1.95A	1.95-	15	.012	----	----	19	UNCH	14.50B	1.75A	
1440	----		----	2.05A	2.05A	2.05-	15	.013	----	----	47	UNCH	15.25B	1.80A	
1450	----		----	2.15A	2.15A	2.15-	15	.013	----	----	558	UNCH	15.75B	1.90A	
1460	----		----	2.25A	2.25A	2.25-	20	.014	----	----	1	UNCH	16.25B	2.00A	
1470	----		----	2.35A	2.40B	2.35-	20	.015	----	----	61	UNCH	17.00B	2.05A	
1475	----		----	2.40A	2.45B	2.40-	20	.015	----	----	61	UNCH	17.25B	2.10A	
1480	----		----	2.45A	2.50A	2.45-	20	.016	----	----	61	UNCH	17.50B	2.15A	
1490	----		----	2.60A	2.60A	2.55-	25	.016	----	----	63	UNCH	18.25B	2.25A	
1500	----		----	2.70A	2.75B	2.70-	20	.017	----	----	36	UNCH	19.00B	2.40A	
1510	----		----	2.85A	2.90B	2.80-	25	.018	----	----	8	UNCH	19.75B	2.50A	
1520	----		----	2.95A	3.05B	2.95-	25	.019	----	----	78	UNCH	20.50B	2.60A	
1525	----		----	3.05A	3.10B	3.05-	25	.020	----	----	65	UNCH	20.75B	2.70A	
1540	----		3.55B	3.25A	3.35B	3.25-	25	.021	----	----	60	UNCH	22.00B	2.85A	
1550	----		----	3.45A	3.50B	3.40-	30	.022	----	----	1133	UNCH	22.75B	3.00A	
1560	----		3.90B	3.60A	3.70B	3.55-	30	.023	----	----	34	UNCH	23.75B	3.15A	
1570	----		4.10B	3.75A	3.85B	3.75-	30	.025	----	----	4	UNCH	24.50B	3.30A	
1575	----		4.20B	3.85A	3.95B	3.80-	35	.025	----	----	64	UNCH	25.00B	3.40A	
1580	----		4.35B	3.95A	4.05B	3.90-	35	.026	----	----	116	UNCH	25.50B	3.50A	
1590	----		4.55B	4.15A	4.30B	4.10-	35	.027	----	----	58	UNCH	26.50B	3.65A	
1600	----		4.75B	4.30A	4.50B	4.30-	35	.029	----	----	89	UNCH	27.50B	3.85A	
1610	----		5.00B	4.50A	4.										



CME Group, Inc.
20 South Wacker Drive, Chicago, Illinois 60606-7499.
Customer Service: (312) 930-1000

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PG48	BULLETIN #148@				E-MINI S&P 500 PUT OPTIONS				wed, Aug 03, 2016				PG48	
1975	----		30.25B	27.25A	28.25A	27.40-	150	.199	----	----	2411	UNCH	103.75B	24.00A
1980	29.00		31.00B	28.00A	28.75A	28.10-	150	.205	----	27	2496 +	27	105.75B	24.75A
1985	----		32.00B	28.75A	29.50A	28.80-	150	.210	----	----	46	UNCH	107.75B	25.25A
1990	----		32.75B	29.50A	30.25A	29.50-	160	.215	----	----	31	UNCH	109.75B	26.00A
1995	----		33.50B	30.25A	31.25A	30.30-	160	.221	----	----	395	UNCH	111.75B	26.50A
2000	32.00		34.50B	31.00A	32.00	31.10-	160	.227	----	28	1144 +	25	113.75B	27.25A
2005	----		35.25B	31.75A	32.75A	31.90-	160	.233	----	----	13	UNCH	116.00B	28.00A
2010	----		36.25B	32.50A	33.50A	32.70-	170	.239	----	----	110	UNCH	118.00B	28.75A
2015	----		37.00B	33.50A	34.50A	33.60-	170	.245	----	----	1	UNCH	120.25B	29.50A
2020	----		38.00B	34.25A	35.25A	34.50-	170	.251	----	----	219	UNCH	122.50B	30.25A
2025	----		39.00B	35.25A	36.25A	35.40-	170	.258	----	----	523	UNCH	124.75B	31.00A
2030	----		40.00B	36.00A	37.25A	36.30-	180	.265	----	----	2047	UNCH	127.00B	31.75A
2035	----		41.00B	37.00A	38.00A	37.20-	190	.271	----	----	371	UNCH	129.50B	32.50A
2040	----		42.00B	38.00A	39.00A	38.20-	190	.278	----	----	3057	UNCH	131.75B	33.50A
2045	----		43.25B	39.00A	40.00A	39.20-	190	.286	----	----	670	UNCH	134.25B	34.25A
2050	----		44.25B	40.00A	41.25A	40.20-	200	.293	----	----	1188	UNCH	136.75B	35.25A
2055	----		45.50B	41.00A	42.25A	41.30-	200	.301	----	----	1094	UNCH	139.25B	36.25A
2060	----		46.75B	42.00A	43.25A	42.40-	200	.308	----	----	280	UNCH	141.75B	37.00A
2065	----		47.75B	43.25A	44.50A	43.50-	210	.316	----	----	2864	UNCH	144.50B	38.00A
2070	----		49.00B	44.25A	45.50A	44.60-	220	.324	----	----	339	UNCH	147.00B	39.00A
2075	----		50.25B	45.50A	46.75A	45.80-	220	.333	----	----	981	UNCH	149.75B	40.00A
2080	----		51.75B	46.75A	48.00A	47.00-	230	.341	----	----	104	UNCH	152.50B	41.25A
2085	----		53.00B	48.00A	49.25A	48.20-	240	.350	----	----	37	UNCH	155.25B	42.25A
2090	----		54.50B	49.25A	50.50A	49.40-	250	.359	----	----	552	UNCH	158.25B	43.50A
2095	----		55.75B	50.50A	52.00A	50.70-	260	.368	----	----	15	UNCH	161.00B	44.50A
2100	----		57.25B	51.75A	53.25A	52.00-	270	.378	----	7	682	UNCH	164.00B	45.75A
2110	----		60.25B	54.75A	56.25A	54.80-	280	.397	----	----	15	UNCH	170.00B	48.25A
2115	----		62.00B	56.00A	57.75A	56.30-	280	.407	----	----	15	UNCH	173.25B	49.50A
2120	----		63.50B	57.50A	59.25A	57.80-	290	.418	----	----	57	UNCH	176.50B	50.75A
2125	----		65.25B	59.25A	60.75A	59.40-	290	.428	----	----	353	UNCH	179.75B	52.25A
2130	----		67.00B	60.75A	62.50A	61.00-	290	.439	----	----	2	UNCH	183.00B	53.75A
2150	----		74.25B	67.50A	69.50A	68.00-	300	.485	----	170	565 +	170	195.50B	59.75A
2155	----		76.25B	69.50A	71.50A	69.90-	300	.497	----	----	13	UNCH	191.50B	61.50A
2160	----		78.50B	71.25A	73.50A	71.80-	300	.510	----	----	613	UNCH	193.50B	63.25A
2165	----		80.50B	73.25A	75.50A	73.70-	310	.522	----	----	161	UNCH	197.00B	65.00A
2170	----		82.75B	75.25A	77.50A	75.60-	330	.535	----	----	21	UNCH	200.00B	66.75A
2175	----		85.00B	77.50A	79.50A	77.70-	330	.548	----	----	4	UNCH	204.00B	68.75A
2180	----		87.25B	79.75A	81.75A	79.90-	340	.562	----	----	10	UNCH	207.25B	70.50A
2185	----		89.75B	81.75A	84.00A	82.10-	350	.575	----	----	1	UNCH	211.00B	72.50A
2195	----		94.50B	86.50A	89.00A	86.80-	360	.603	----	----	2	UNCH	218.25B	76.75A
2205	----		100.00B	91.50A	94.00A	91.80-	370	.631	----	----	37	UNCH	226.00B	81.25A
2210	----		102.75B	94.25A	96.75A	94.40-	380	.645	----	----	6	UNCH	229.75B	83.75A
2215	----		105.50B	97.00A	99.50A	97.10-	390	.660	----	----	2	UNCH	231.50B	86.00A
2225	----		111.50B	102.50A	105.25A	102.90-	390	.689	----	----	38	UNCH	233.75B	91.25A
2235	----		117.75B	108.75A	111.50A	109.00-	400	.717	----	----	40	UNCH	222.00B	96.75A
2245	----		124.50B	115.25A	118.00A	115.40-	410	.745	----	----	90	UNCH	218.25B	102.50A
2250	----		128.00B	118.50A	121.50A	118.80-	410	.759	----	----	23	UNCH	261.75	105.50A
2270	----		----	----	137.50N	133.20-	430	.812	----	----	81	UNCH	143.00B	118.75A
2310	----		----	----	170.50N	166.10-	440	.896	----	----	22	UNCH	287.75	270.00
TOTAL										270	53753 +	226		
DEC16	EOM	EMINI	S&P	P										
800	----		----	----	0.25N	.25	UNCH	.001	----	----	1	UNCH	.60B	.55
825	----		----	----	0.30N	.30	UNCH	.001	----	----	244	UNCH	.35B	.30
925	----		----	----	0.45N	.40-	5	.001	----	----	283	UNCH	.60B	.45
950	----		----	----	0.50N	.45-	5	.002	----	----	281	UNCH	.65B	.50
1025	----		----	----	0.65N	.60-	5	.002	----	----	6	UNCH	1.45B	.65A
1100	----		.85A	----	0.85A	.80-	10	.004	----	----	2483	UNCH	2.00B	.85A
1125	----		----	----	0.95N	.90-	5	.004	----	----	2	UNCH	2.25B	.95A
1200	----		1.25A	1.25A	1.20-	10	.006	----	----	----	32	UNCH	3.10B	1.20A
1225	----		1.40A	1.40A	1.35-	10	.007	----	----	----	38	UNCH	3.45B	1.40A
1250	----		1.55A	1.55A	1.55-	5	.008	----	----	----	149	UNCH	3.85B	1.55A
1300	----		1.95A	1.95A	1.90-	10	.010	----	----	----	11	UNCH	4.75B	1.80A
1325	----		2.15A	2.15A	2.10-	15	.011	----	----	----	32	UNCH	5.25B	2.00A
1350	----		2.40A	2.40A	2.35-	15	.013	----	----	----	405	UNCH	5.75B	2.25A
1375	2.75	2.80B	2.70A	2.70A	2.60-	20	.014	----	----	1	33	UNCH	6.50B	2.45A
1400	----	3.15B	3.00A	3.00A	2.90-	20	.016	----	----	----	34	UNCH	7.00B	2.75A
1410	----	3.30B	3.10A	3.15A	3.05-	20	.017	----	----	----	62	UNCH	7.50B	2.85A
1450	----	3.95B	3.70A	3.70A	3.60-	30	.020	----	----	----	360	UNCH	8.75B	3.35A
1460	----	----	3.85A	3.85A	3.80-	30	.021	----	----	----	38	UNCH	9.00B	3.50A
1475	----	4.40B	4.10A	4.15A	4.05-	30	.023	----	----	----	36	UNCH	9.75B	3.70A
1480	----	4.50B	4.15A	4.20A	4.15-	30	.023	----	----	----	4	UNCH	10.00B	3.80A
1490	----	4.70B	4.35A	4.40A	4.35-	30	.025	----	----	----	15	UNCH	10.25B	3.95A
1500	----	4.90B	4.55A	4.60A	4.55-	30	.026	----	----	----	3	UNCH	10.75B	4.15A
1575	----	6.75B	6.25A	6.50A	6.30-	30	.037	----	----	----	28	UNCH	14.50B	5.75A
1590	----	7.25B												



PRELIMINARY

PG48		BULLETIN #148@										E-MINI S&P 500 PUT OPTIONS										wed, Aug 03, 2016										PG48		
1965	1.00		1.00	.70A	----		.65-	0.25	.015	----	161	2341	+	157	59.50B	.55A																		
1970	.90		1.05B	.75A	----		.70-	0.25	.016	----	512	2655	+	249	61.00B	.60A																		
1975	.90		1.15B	.75A	----		.75-	0.25	.018	----	512	10244	+	115	63.00B	.65A																		
1980	----		1.20B	.80A	----		.80-	0.25	.019	----	238	3472	+	236	64.25B	.65A																		
1985	1.25		1.30B	.85A	----		.85-	0.30	.021	----	25	2403	+	25	66.00B	.70A																		
1990	1.35		1.40B	.85	----		.90-	0.30	.022	----	53	4558	-	15	68.00B	.75A																		
1995	1.10		1.45B	.95A	----		.95-	0.30	.024	----	90	2491	+	80	69.50B	.80																		
2000	1.50		1.65	1.00	----		1.00-	0.35	.025	----	213	19774	+	60	71.25B	.85																		
2005	1.25		1.70B	1.05	----		1.05-	0.40	.027	----	175	2714	+	170	73.50B	.90A																		
2010	1.70		1.85B	1.15A	----		1.15-	0.40	.030	----	176	2139	UNCH		75.50B	.95																		
2015	1.45		2.00B	1.20A	----		1.25-	0.40	.032	----	55	2897	+	3	77.75B	.95																		
2020	1.90		2.15B	1.30	----		1.30-	0.45	.034	----	193	7438	-	21	80.25B	1.05																		
2025	2.25		2.30B	1.35A	----		1.40-	0.50	.037	----	144	8735	+	132	82.50B	1.15																		
2030	1.95		2.50B	1.45	----		1.50-	0.55	.041	----	408	4008	+	179	85.00B	1.20																		
2035	1.65		2.75B	1.60A	----		1.65-	0.55	.045	----	1	1689	-	1	87.50B	1.30																		
2040	3.15		3.15	1.70	----		1.80-	0.60	.049	----	307	5010	+	230	90.25B	1.40																		
2045	2.70		3.20B	1.85A	----		1.90-	0.70	.053	----	203	4394	+	176	92.75B	1.55																		
2050	3.30		3.50B	2.00	----		2.05-	0.80	.058	----	694	11083	+	207	95.50B	1.65																		
2055	2.90		3.80B	2.15A	----		2.25-	0.85	.064	----	298	3239	-	1	98.25B	1.75																		
2060	4.00		4.20B	2.35A	----		2.45-	0.95	.070	----	139	5677	+	16	101.25B	1.95																		
2065	3.30		4.60B	2.60A	----		2.70-	1.00	.078	----	93	1950	+	81	104.25B	2.10A																		
2070	4.55		5.00	2.85A	----		2.95-	1.10	.085	----	166	5977	-	56	107.25B	2.30																		
2075	4.45		5.50B	3.15A	----		3.25-	1.20	.094	----	583	8790	-	193	110.50B	2.35																		
2080	5.00		5.75B	3.45A	----		3.60-	1.30	.105	----	501	3564	+	148	113.75B	2.75																		
2085	5.75		6.50B	3.80A	----		3.95-	1.45	.116	----	350	2194	+	128	117.00B	2.80																		
2090	5.25		7.25B	4.20A	----		4.40-	1.50	.129	----	640	5763	-	36	118.50B	3.20A																		
2095	6.50		8.00B	4.65A	----		4.85-	1.65	.142	----	461	2347	+	55	119.00B	3.50A																		
2100	7.75		8.75B	5.25	----		5.40-	1.80	.158	----	484	10897	-	5	122.25B	3.65																		
2105	7.50		9.50B	5.75	----		6.00-	1.90	.176	----	231	1598	+	12	126.50B	4.20A																		
2110	10.50		10.50	6.50A	----		6.70-	2.00	.196	----	723	3938	+	200	129.75B	4.60A																		
2115	9.25		11.50B	7.25A	----		7.40-	2.20	.216	----	414	2397	+	126	133.75B	5.00																		
2120	11.75		12.75B	8.00	----		8.20-	2.40	.239	----	717	4298	-	387	138.25B	5.50																		
2125	12.00		14.00B	9.00A	----		9.10-	2.60	.265	----	862	9893	-	69	142.25B	6.25A																		
2130	12.75		15.50B	9.75	----		10.20-	2.70	.294	----	231	3914	+	30	139.75B	6.50																		
2135	15.00		17.00B	11.00A	----		11.30-	3.00	.324	----	152	2225	-	14	143.50B	7.50A																		
2140	15.75		18.75B	12.25A	----		12.60-	3.10	.358	----	564	5650	+	6	147.50B	8.00																		
2145	17.25		20.50B	13.75A	----		14.10-	3.30	.395	----	83	1823	+	17	147.25B	9.25A																		
2150	19.50		22.25B	15.25A	----		15.70-	3.50	.435	----	370	7602	+	149	146.25B	10.00																		
2155	24.50		24.50	17.00A	----		17.50-	3.70	.478	----	553	1557	+	72	138.00B	11.25A																		
2160	25.00		27.00B	19.25A	----		19.60-	3.80	.523	----	134	3821	-	59	136.50B	12.50																		
2165	24.50		29.75B	21.50A	----		21.80-	4.00	.570	----	24	2022	UNCH		136.00B	14.00A																		
2170	27.00		32.50B	23.75A	----		24.40-	4.00	.618	----	146	1673	+	77	134.00B	15.50																		
2175	28.75		35.75B	26.50A	----		27.20-	4.10	.668	----	38	896	+	31	132.50B	17.50A																		
2180	31.75		39.25B	30.00A	----		30.20-	4.30	.717	----	5	735	-	2	149.00	19.75A																		
2185	----		42.75B	33.50A	----		33.60-	4.30	.764	----	----	189	UNCH		131.25B	22.25A																		



CME Group, Inc.
20 South Wacker Drive, Chicago, Illinois 60606-7499.
Customer Service: (312) 930-1000



PRELIMINARY

PG48	BULLETIN #148@				E-MINI S&P 500 PUT OPTIONS				wed, Aug 03, 2016				PG48	
1865	8.25	8.75B	7.50A	----	7.40-	0.60	.072	----	57	375	-	13	59.50B	6.50
1870	8.50	9.00B	7.75A	----	7.60-	0.70	.074	----	162	1159	+	43	60.50B	6.75
1875	8.75	9.25B	8.00A	----	7.90-	0.70	.077	----	214	3430	+	80	61.75B	7.00A
1880	8.50	9.50B	8.25A	----	8.20-	0.70	.079	----	17	566	-	11	62.75B	7.25A
1885	-----	9.75B	8.50A	----	8.50-	0.70	.082	----	-----	840	UNCH	64.00B	7.50A	
1890	9.25	10.25B	8.75A	----	8.80-	0.70	.085	----	24	482	-	24	65.25B	7.50
1895	9.25	10.50B	9.00A	----	9.10-	0.70	.088	----	10	453	-	10	66.50B	8.00A
1900	10.00	10.75B	9.25A	----	9.40-	0.70	.091	----	1626	4223	+	278	67.75B	8.25A
1905	10.25	11.25B	9.50A	----	9.70-	0.70	.094	----	29	1676	-	29	69.00B	8.50A
1910	10.50	11.50B	10.00A	----	10.00-	0.70	.097	----	33	451	-	33	70.50B	8.75A
1915	10.75	12.00B	10.25A	----	10.30-	0.80	.101	----	40	434	+	29	71.75B	9.00A
1920	-----	12.25B	10.50A	----	10.60-	0.90	.104	----	-----	742	UNCH	73.25B	9.25A	
1925	11.75	12.75B	11.00A	----	10.90-	1.00	.107	----	46	3037	+	4	74.50B	9.50A
1930	12.75	13.25B	11.25A	----	11.30-	1.00	.111	----	39	469	UNCH	76.00B	9.75A	
1935	12.50	13.50B	11.50A	----	11.70-	1.00	.115	----	36	446	-	16	77.50B	10.00A
1940	13.50	14.00B	12.00A	----	12.10-	1.00	.119	----	99	866	+	54	79.00B	10.50A
1945	13.25	14.50B	12.50A	----	12.50-	1.00	.123	----	21	407	+	19	80.50B	10.75A
1950	14.50	15.00B	12.75A	----	12.90-	1.00	.127	----	368	2569	-	244	82.00B	10.50
1955	14.00	15.50B	13.25A	----	13.30-	1.10	.131	----	30	904	+	10	83.50B	11.50A
1960	15.25	16.00B	13.75A	----	13.70-	1.20	.135	----	79	758	+	57	85.25B	11.75A
1965	15.75	16.50B	14.00A	----	14.20-	1.20	.140	----	30	380	+	18	87.25B	12.25A
1970	16.00	17.00B	14.50A	----	14.70-	1.20	.145	----	80	507	-	9	89.00B	12.50A
1975	15.75	17.75B	15.00A	----	15.20-	1.20	.150	----	35	1444	-	15	90.75B	13.00A
1980	17.50	18.25B	15.50A	----	15.70-	1.20	.155	----	60	1293	+	46	92.75B	13.25A
1985	18.00	18.75B	16.00A	----	16.20-	1.30	.161	----	80	168	-	5	94.75B	13.75A
1990	18.75	19.50B	16.50A	----	16.70-	1.40	.166	----	40	474	UNCH	96.75B	14.00	
1995	19.00	20.00B	17.00A	----	17.30-	1.40	.172	----	21	174	UNCH	98.75B	14.75A	
2000	20.00	20.75B	17.75A	----	17.90-	1.40	.178	----	126	2495	+	29	100.75B	15.25
2005	20.25	21.50B	18.25A	----	18.50-	1.50	.184	----	60	552	+	58	103.00B	15.75A
2010	20.25	22.00B	19.00A	----	19.10-	1.60	.190	----	23	699	-	17	105.00B	16.00
2015	21.25	22.75B	19.50A	----	19.80-	1.60	.197	----	59	615	+	39	107.25B	16.75A
2020	22.25	23.50B	20.25A	----	20.50-	1.60	.204	----	20	622	UNCH	109.50B	17.25A	
2025	21.50	24.50B	20.75A	----	21.20-	1.60	.211	----	40	1534	+	40	111.75B	17.75A
2030	-----	25.25B	21.50A	----	21.90-	1.70	.218	----	-----	622	UNCH	114.25B	18.50A	
2035	23.75	26.00B	22.25A	----	22.60-	1.80	.225	----	49	410	+	29	116.50B	19.00A
2040	25.75	27.00B	23.00A	----	23.30-	1.90	.233	----	86	1587	+	77	119.00B	19.75A
2045	26.00	27.75B	23.75A	----	24.10-	1.90	.241	----	67	693	+	42	121.50B	20.25A
2050	27.75	28.75B	24.50	----	24.90-	2.00	.249	----	159	3445	+	125	124.00B	21.00A
2055	26.50	29.75B	25.50A	----	25.70-	2.10	.257	----	49	568	-	9	126.75B	21.75A
2060	28.50	30.75B	26.25A	----	26.60-	2.10	.266	----	10	867	-	9	129.50B	22.50A
2065	29.25	31.75B	27.25A	----	27.50-	2.20	.275	----	30	1142	+	20	132.00B	23.25A
2070	30.25	33.00B	28.25A	----	28.40-	2.30	.285	----	31	1183	+	5	134.75B	24.00A
2075	33.00	34.00B	29.25A	----	29.40-	2.40	.295	----	24	2670	+	22	137.75B	24.75A
2080	34.00	35.25B	30.25A	----	30.40-	2.50	.305	----	47	2275	+	22	140.50B	25.75A
2085	34.00	36.50B	31.25A	----	31.50-	2.50	.315	----	43	252	+	38	143.50B	26.50A
2090	34.00	37.75B	32.50A	----	32.60-	2.60	.326	----	8	711	+	8	146.50B	27.50A
2095	35.50	39.00B	33.50A	----	33.80-	2.60	.338	----	39	705	+	13	149.50B	28.50A
2100	38.00	40.25B	34.75A	----	35.00-	2.70	.350	----	78	2442	+	5	152.75B	29.50A
2105	37.50	41.75B	36.00A	----	36.20-	2.80	.362	----	20	290	UNCH	156.00B	30.50A	
2110	38.25	43.25B	37.25A	----	37.50-	2.90	.374	----	10	2196	+	10	159.25B	31.75A
2115	43.00	44.75B	38.50A	----	38.90-	2.90	.387	----	50	205	+	20	162.50B	32.75A
2120	43.75	46.25B	40.00A	----	40.30-	3.00	.400	----	84	733	+	30	166.00B	34.00A
2125	44.25	47.75B	41.50A	----	41.70-	3.10	.414	----	21	3719	+	21	169.00B	35.25A
2130	46.50	49.50B	43.00A	----	43.20-	3.20	.428	----	40	832	UNCH	164.25B	36.50A	
2135	46.50	51.25B	44.50A	----	44.80-	3.30	.443	----	20	216	UNCH	167.25B	37.75A	
2140	47.50	53.00B	46.25A	----	46.40-	3.40	.458	----	24	295	UNCH	170.75B	39.25A	
2145	-----	55.00B	47.75A	----	48.10-	3.50	.474	----	184	449	+	52	174.00B	40.75A
2150	-----	57.00B	49.75A	----	49.90-	3.60	.490	----	194	2210	-	169	177.25B	42.25A
2155	-----	59.00B	51.50A	----	51.80-	3.70	.507	----	-----	593	UNCH	181.00B	43.75A	
2160	54.75	61.25B	53.50A	----	53.80-	3.70	.523	----	43	884	+	14	184.50B	45.50A
2165	-----	63.50B	55.50A	----	55.90-	3.80	.541	----	-----	288	UNCH	187.75B	47.25A	
2170	-----	65.75B	57.75A	----	58.00-	3.90	.559	----	-----	1024	UNCH	191.50B	49.00	
2175	-----	68.25B	59.75A	----	60.30-	3.80	.577	----	-----	1747	UNCH	195.25B	51.00A	
2180	-----	70.75B	62.25A	----	62.60-	3.90	.595	----	-----	230	UNCH	199.25B	53.00A	
2185	-----	73.25B	64.50A	----	65.10-	3.90	.614	----	-----	188	UNCH	202.00B	55.00A	
2190	-----	76.00B	67.00A	----	67.60-	4.00	.633	----	-----	55	UNCH	198.25B	57.25A	
2195	-----	78.75B	69.75A	----	70.20-	4.10	.652	----	-----	114	UNCH	192.50B	59.50A	
2200	-----	81.75B	72.50A	----	73.00-	4.10	.672	----	-----	291	UNCH	191.25B	61.75A	
2205	-----	84.75B	75.25A	----	75.80-	4.30	.692	----	-----	26	UNCH	189.50B	64.25A	
2210	-----	88.00B	78.75A	----	78.80-	4.30	.711	----	-----	896	UNCH	188.75B	66.75A	
2215	-----	91.25B	81.75A	----	81.90-	4.40	.731	----	42	501	UNCH	184.50B	69.50A	
2220	-----	94.50B	85.00A											

PRELIMINARY																
PG48	BULLETIN #148@										E-MINI S&P 500 PUT OPTIONS			wed, Aug 03, 2016		PG48
1820	----		12.00B	10.75A	----		10.80-	0.80	.082	----	----	109	UNCH	13.75B	9.75A	
1825	----		12.50B	11.00A	----		11.10-	0.80	.084	----	----	64	UNCH	14.00B	10.00A	
1830	12.00		12.75B	11.25A	----		11.40-	0.80	.086	----	3	52 +	3	14.25B	10.25	
1835	----		13.00B	11.50A	----		11.70-	0.80	.089	----	----	56	UNCH	14.75B	10.50A	
1840	----		13.50B	12.00A	----		12.00-	0.80	.091	----	----	66	UNCH	15.00B	10.75A	
1845	----		13.75B	12.25A	----		12.30-	0.80	.094	----	----	82	UNCH	15.25B	11.00A	
1850	----		14.00B	12.50A	----		12.60-	0.80	.096	----	----	2189	UNCH	15.75B	11.25A	
1855	----		14.50B	12.75A	----		12.90-	0.80	.098	----	----	95	UNCH	16.00B	11.50A	
1860	----		15.00B	13.25A	----		13.20-	0.90	.101	----	----	75	UNCH	16.50B	11.75A	
1865	----		15.25B	13.50A	----		13.50-	1.00	.104	----	----	20	UNCH	16.75B	12.25A	
1870	----		15.75B	13.75A	----		13.90-	1.00	.107	----	----	979	UNCH	17.25B	12.50A	
1875	----		16.00B	14.25A	----		14.30-	1.00	.110	----	----	76	UNCH	17.75B	12.75A	
1880	----		16.50B	14.50A	----		14.70-	1.00	.113	----	----	110	UNCH	18.00B	13.25A	
1885	15.25		17.00B	15.00A	----		15.10-	1.00	.116	----	16	115 +	16	18.50B	13.50A	
1890	15.75		17.50B	15.50A	----		15.50-	1.00	.119	----	1	64 +	1	19.00B	13.75A	
1895	15.75		17.75B	15.75	----		15.90-	1.00	.122	----	90	108 +	50	19.50B	14.25A	
1900	----		18.25B	16.25A	----		16.30-	1.10	.126	----	----	3451	UNCH	20.00B	14.50A	
1905	----		18.75B	16.75A	----		16.70-	1.20	.129	----	----	11	UNCH	20.50B	15.00A	
1910	----		19.25B	17.00A	----		17.10-	1.30	.132	----	----	39	UNCH	21.00B	15.25A	
1915	17.50		19.75B	17.50	----		17.50-	1.40	.136	----	37	108 +	37	21.50B	15.75A	
1920	----		20.25B	18.00A	----		18.00-	1.40	.140	----	----	178	UNCH	22.00	16.00A	
1925	----		21.00B	18.50A	----		18.50-	1.40	.144	----	----	258	UNCH	22.50B	16.50A	
1930	----		21.50B	19.00A	----		19.00-	1.40	.147	----	----	974	UNCH	23.00B	17.00A	
1935	----		22.00B	19.50A	----		19.50-	1.40	.152	----	----	51	UNCH	23.50B	17.50A	
1940	----		22.50B	20.00A	----		20.00-	1.50	.156	----	----	1037	UNCH	24.25	17.75A	
1945	----		23.25B	20.50A	----		20.50-	1.60	.160	----	----	80	UNCH	24.75B	18.25A	
1950	22.75		23.75B	21.00A	----		21.00-	1.70	.164	----	11	145	UNCH	25.25B	18.50	
1955	----		24.50B	21.75A	----		21.60-	1.70	.169	----	----	148	UNCH	26.00B	19.25A	
1960	24.00		25.25B	22.25A	----		22.20-	1.70	.173	----	10	2101	UNCH	26.50B	19.75A	
1965	----		26.00B	22.75A	----		22.80-	1.70	.178	----	----	635	UNCH	27.25B	20.25A	
1970	----		26.50B	23.50A	----		23.50-	1.70	.183	----	----	566	UNCH	27.75B	20.75A	
1975	24.75		27.25B	24.00A	----		24.20-	1.70	.189	----	14	90 +	14	28.50B	21.50A	
1980	----		28.00B	24.75A	----		24.90-	1.70	.194	----	----	36	UNCH	29.25B	22.00A	
1985	----		28.75B	25.50A	----		25.60-	1.70	.199	----	----	101	UNCH	30.00B	22.50A	
1990	----		29.50B	26.00A	----		26.30-	1.70	.205	----	----	1820	UNCH	30.75B	23.25A	
1995	----		30.25B	26.75A	----		27.00-	1.80	.211	----	----	74	UNCH	31.75B	23.75A	
2000	29.00		31.00B	27.50A	----		27.80-	1.80	.217	----	33	1294 -	8	32.50B	24.50A	
2005	29.25		32.00B	28.25A	----		28.60-	1.80	.223	----	8	131 -	8	33.25B	25.00A	
2010	31.00		32.75B	29.00A	----		29.40-	1.80	.229	----	56	110 -	17	34.25B	25.75A	
2015	31.00		33.75B	30.00A	----		30.20-	1.80	.235	----	54	1250 +	39	35.00B	26.50A	
2020	31.50		34.50B	30.75A	----		31.00-	1.90	.242	----	30	1070 -	11	36.00B	27.00A	
2025	32.75		35.50B	31.50A	----		31.90-	1.90	.248	----	7	1387 +	7	37.00B	27.75A	
2030	34.25		36.50B	32.50A	----		32.80-	1.90	.255	----	123	277 +	123	38.00B	28.50A	
2035	34.50		37.50B	33.25A	----		33.70-	1.90	.262	----	12	35 +	9	39.00B	29.50A	
2040	35.25		38.50B	34.25A	----		34.60-	2.00	.269	----	6	38 +	6	40.00B	30.25A	
2045	36.50		39.50B	35.25A	----		35.50-	2.10	.277	----	47	47 +	31	41.00B	31.00A	
2050	39.75		40.50B	36.25A	----		36.50-	2.10	.284	----	300	948 +	209	42.25B	31.75A	
2055	39.25		41.75B	37.25A	----		37.50-	2.20	.292	----	31	61 +	31	43.25B	32.75A	
2060	----		42.75B	38.25A	----		38.50-	2.30	.300	----	----	108	UNCH	44.50B	33.75A	
2065	----		44.00B	39.25A	----		39.60-	2.30	.308	----	----	91	UNCH	45.75B	34.50A	
2070	----		45.25B	40.25A	----		40.70-	2.30	.317	----	----	54	UNCH	47.00B	35.50A	
2075	----		46.50B	41.50A	----		41.80-	2.40	.325	----	----	176	UNCH	48.00B	36.50A	
2080	----		47.75B	42.75A	----		43.00-	2.40	.334	----	2	1081 +	2	49.50B	37.50A	
2085	----		49.00B	44.00A	----		44.20-	2.50	.344	----	----	42	UNCH	50.75B	38.50A	
2090	----		50.50B	45.25A	----		45.40-	2.60	.353	----	----	109	UNCH	52.00B	39.75A	
2095	----		51.75B	46.50A	----		46.70-	2.60	.363	----	----	58	UNCH	53.50B	40.75A	
2100	----		53.25B	47.75A	----		48.00-	2.70	.372	----	----	723	UNCH	55.00B	42.00A	
2105	----		54.75B	49.00A	----		49.30-	2.80	.383	----	----	85	UNCH	56.50B	43.00A	
2110	----		56.25B	50.50A	----		50.70-	2.90	.393	----	----	160	UNCH	58.00B	44.25A	
2115	----		57.75B	52.00A	----		52.10-	3.00	.404	----	----	100	UNCH	59.75B	45.50A	
2120	----		59.50B	53.50A	----		53.60-	3.00	.415	----	----	106	UNCH	61.25B	47.00A	
2125	----		61.25B	55.00A	----		55.20-	3.00	.426	----	----	23	UNCH	63.00B	48.25A	
2130	----		62.75B	56.50A	----		56.80-	3.00	.437	----	----	300	UNCH	64.75B	49.75A	
2135	----		64.75B	58.00A	----		58.40-	3.10	.449	----	----	222	UNCH	66.75B	51.00A	
2140	----		66.50B	59.75A	----		60.10-	3.10	.461	----	----	112	UNCH	68.50B	52.50A	
2145	----		68.25B	61.50A	----		61.80-	3.20	.474	----	----	37	UNCH	70.50B	54.00A	
2150	64.25		70.25B	63.25A	----		63.60-	3.30	.486	----	1	968 +	1	72.50B	55.75A	
2155	----		72.25B	65.25A	----		65.40-	3.40	.499	----	----	450	UNCH	74.50B	57.25A	
2160	----		74.25B	67.00A	----		67.30-	3.50	.513	----	----	800	UNCH	76.75B	59.00A	
2165	----		76.50B	69.00A	----		69.30-	3.60	.526	----	----	45	UNCH	78.75B	60.75A	
2170	----		78.75B	71.25A	----		71.40-	3.50	.540	----	1	92 +	1	81.00B	62.50A	
2175	76.00		81.00B	73.25A	----		73.50-	3.60	.554	----	10	226 +	10	83.50B	64.50A	
2180	----		83.25B	75.50A	----		75.70-	3.70	.568	----	----	10	UNCH	85.75B	66.50A	
2185	----		85.75B	77.75A	----		78.00-	3.80	.583	----	----	7	UNCH	88.25B	68.50A	
2190	----		88.25B	80.00A	----		80.30-	3.90	.597	----	----	465	UNCH	91.00B	70.75A	
2200	----		93.50B	85.00A	----		85.30-	4.00	.627	----	----	2	UNCH	96.25B	75.00A	
2205	----		96.25B	87.50A	----		88.00-	4.00	.642	----	----	2	UNCH	99.25B	77.25A	
2220	----		105.00B	96.00A	----		96.30-	4.30	.688	----	----	2	UNCH	108.00B	84.75A	
2225	----		108.25B	99.25A	----		99.30-	4.30	.704	----	----	2	UNCH	111.00B	87.50A	
2240	----		118.00B	108.75A	----		108.90-	4.40	.749	----	----	2	UNCH	121.00B	96.00A	
2260	----		----	----	----		122.90-	4.50	.807	----	----	2	UNCH	127.50B	108.75A	
TOTAL											2040	47203 +	1611			

E-MINI S&P 500 FIXING PRICE (ESF): Sep17 2157.68