WAYNE WHALEY MARKET COMMENTARY/STUDIES WITTER & LESTER

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DOES THE S&P MELTDOWN MORE OFTEN THAN MELTUP ?

The motivation for this study comes from

1. The historically low volatility levels the S&P is experiencing over the last quarter and
2. My interest in trading S&P options and the impact potential volatility outbreaks have on the decisions I make.

I have been trading S&P index options monthly/weekly since 1988 and professionally since 1994. The first year involved a lot of experimentation and learning. I tried buying, selling, spreads, straddles, butterflies and an assortment of insects I struggle to recall. As is the case for most adolescent option traders, it was imposed upon me fairly quickly that when I bought options, I tended to lose money and when I sold options, I tended to post some kind of positive number, especially if I concentrated on the 'Out of the Moneys, away from the current strike price. During the 1988-1990 time frame, of which much of my perspective developed, the 22% Black Monday of October 19, 1987 was still fresh in the memory of participants and was still priced into the 'Out of Money' Puts and I gravitated into a very comfortable zone of selling the 'Out of Money' Puts and, at that time, hedging them with the sell of 'At the Money' Calls in concert with market fluctuations, as deemed necessary. My success at doing this, at the time, was a major factor in my leaving a 12 year career as a software engineer in the defense industry to convert an obsessive hobby into a career.

Due largely to some recent 21st century, premium write, unfriendly events, such as two 50% Bear Markets and a 2010 thirty minute flash crash, many a 21st century asset allocator has understandably sworn off premium selling and the question of whether selling 'well hedged' Premium has a place in a portfolio, is a relevant subject, especially for those of us who are inclined to engage in what many consider frivolous activities.

But back to the question of option premium pricing, the deal is, from most any statistical valuation perspective 'Out of the Money' S&P index Puts are expensive, very expensive, arguably, unjustifiably expensive. For example, if you have not taken a good look lately at the disparity in prices between 'Out of the Money' S&P Call and Put premiums, the day I began taking these notes on February 25, 2017 was a good example, especially given the March SP closed on an even increment of five (2365.0) that day making it easy to do a symmetric comparison of Put and Call Prices.

End of the Month S&P March Calls vs Puts on Feb 25, 2017		
With the March S&P = 2365	End of March Call	End of March Put
At the Money 2365 S&P Calls & Puts	24.30	28.90
50 Points (2.1%) out of the Money	5.50	14.20
100 Points (4.2%) out of the Money	1.05	7.60

The end of month March Call, 100 points out of the money was 1.05 vs 7.60 for the analogous Put, also 100 Points out of the money. If you haven't lived through a Black Monday, a 9/11, a Banking Crisis or a computer algorithm generated flash crash, you would be inclined to almost instantaneously argue the above relationship seems counter intuitive for the pricing of four week options given that over the 50 year period 1967-2016, 60% of calendar months have been S&P positive for an average monthly gain of 0.65%. In my opinion, there are three explanations for this pricing anomaly which, I propose, does not fully justify the enormous discrepancy in S&P Put and Call prices.

The first explanation is that the purchase of 'Out of the Money' Put options are popular by fund managers to hedge large equity portfolios or similarly long biased funds against large unforeseen, downside moves and thus the supply/demand forces trump mathematically justifiable pricing methods. Just as the equation is stacked in the favor of insurance writers, casinos operators and raffle operators, the option writer can afford to occasionally provide sweepstakes winnings to the option buyer in return for the steady income which accompanies a well planned option write strategy, especially if, as is the case of the insurance writer, the risk is spread over different markets, and he, the insurance writer himself, invest in forms of insurance to protect himself, as well, against the occasional draconian style natural disasters, which insurance writers fret about, utilizing what option traders refer to as 'the hedge'.

The second justification for the Call/Put premium discrepancy, which brings us to the title of today's study, is the common perception that equity markets are more prone to meltdowns than meltups. Given this study is motivated by the pricing of 'monthly' S&P options, I again looked at the last fifty years for monthly moves and I suspect surprisingly to most, during that period, there have been eleven calendar months which posted double digit percentage gains compared to only eight months which have posted ten percent losses.

TEN PERCENT CALENDAR MONTH MOVES 1967-2016

TEN PCT DOWN MONTHS				TEN PCT UP MONTHS			
#	YEAR	MONTH	PCTCH	#	YEAR	MONTH	PCTCH
1	1973	Nov	-11.39	1	1974	Oct	16.30
2	1974	Sep	-11.93	2	1975	Jan	12.28
3	1980	Mar	-10.18	3	1976	Jan	11.83
4	1987	Oct	-21.76	4	1980	Nov	10.24
5	1998	Aug	-14.56	5	1982	Aug	11.60
6	2002	Sep	-11.00	6	1982	Oct	11.04
7	2008	Oct	-16.83	7	1984	Aug	10.63
8	2009	Feb	-10.99	8	1987	Jan	13.18
				9	1991	Dec	11.16
				10	2011	Oct	10.77

The third possible explanation for why Puts are 'currently' so expensive stems from the fact that three of those noted eight 10% down months of the last half century occurred in the 21st century vs only one ten percent up month this last half century. In fact, going all the way back to 1950, there have been three 50% Bear Markets and two of them occurred in the first decade of the 21st century, which was followed up by the 30 minute flash crash in May of 2010. This may be a partial explanation for the large discrepancy between 'Out of Money' Puts and Calls, but as I mentioned, I have been trading options since 1988 and although maybe not to the same extent as recently, 'Out of the Money' Puts have always sold at a multiple to the similar Call on the opposite side, even during the 90s, a decade in which the S&P tripled in somewhat straight up fashion. Worthy of note as well, we had a 46 month period between Sept 2011-July 2015, which was absent a 10% correction. Before leaving the monthly volatility analysis, for your information, there were 79 five% up months vs 57 five% down months.

Ok, Wayne on a monthly basis, what about the intra month or daily Meltdowns, resulting from unforeseen circumstances, such as Chernobyls, Tsunami's, Assasinations, Iraqs invading Kuwaits, Planes flying into buildings, and potential events ahead of us, such as North Korea's launching Ballistic Missiles at land rather than oceans, Hoover Dam's exploding, etc.. In the past 50 years, ninety nine percent of days experienced an S&P move of less than 3.5% from (1967-2016). Let's identify a One Day Meltdown/Up as those three standard deviation cases outside that range. A 3.5% day today, would be an 80 point S&P move and I think fair to say, considered a meltdown/up. I found it incredibly interesting, that over those last 50 years, there were sixty six +3.5% days vs only fifty four 3.5% down Days.

THE SIXTY SIX 3.5% UP S&P DAYS 1967-2016

#	DATE	%	#	DATE	%	#	DATE	%	#	DATE	%	#	DATE	%	#	DATE	%CHG
1	19700527	5.02	12	19871021	9.10	23	20001205	3.87	34	20021011	3.91	45	20081020	4.77	56	20090121	4.35
2	19740712	4.08	13	19871029	4.93	24	20010103	5.01	35	20021015	4.73	46	20081028	10.79	57	20090224	4.01
3	19741007	4.19	14	19880104	3.59	25	20010405	4.37	36	20030317	3.54	47	20081104	4.08	58	20090310	6.37
4	19741009	4.60	15	19910117	3.73	26	20010418	3.92	37	20080311	3.71	48	20081113	6.92	59	20090312	4.07
5	19741029	3.91	16	19971028	5.12	27	20010924	3.90	38	20080318	4.24	49	20081121	6.32	60	20090323	7.08
6	19781101	3.97	17	19980901	3.83	28	20020508	3.75	39	20080401	3.59	50	20081124	6.47	61	20090409	3.81
7	19800422	3.64	18	19980908	5.09	29	20020705	3.67	40	20080918	4.33	51	20081126	3.53	62	20100510	4.40
8	19820817	4.71	19	19980923	3.52	30	20020724	5.73	41	20080919	4.03	52	20081202	3.99	63	20110809	4.74
9	19820820	3.54	20	19981015	4.17	31	20020729	5.41	42	20080930	5.27	53	20081205	3.73	64	20110811	4.63
10	19821103	3.91	21	19991028	3.53	32	20020814	4.00	43	20081018	11.58	54	20081208	3.76	65	20111130	4.33
11	19871020	5.33	22	20000316	4.76	33	20021001	4.00	44	20081016	4.24	55	20081216	5.14	66	20150826	3.91

THE FIFTY FOUR 3.5% DOWN S&P DAYS 1967-2016

#	DATE	%	#	DATE	%	#	DATE	%	#	DATE	%	#	DATE	%	#	DATE	%CHG
1	19741118	-3.67	10	19880108	-6.77	19	20000414	-5.78	28	20081002	-4.03	37	20081114	-4.18	46	20090420	-4.83
2	19821025	-3.97	11	19880414	-4.36	20	20010312	-4.32	29	20081006	-3.85	38	20081119	-6.12	47	20100520	-3.90
3	19860911	-4.81	12	19891013	-6.12	21	20010917	-4.92	30	20081007	-5.74	39	20081120	-6.71	48	20110804	-4.78
4	19871016	-5.16	13	19911115	-3.66	22	20020719	-3.84	31	20081009	-7.62	40	20081201	-8.93	49	20110808	-6.66
5	19871019	-20.47	14	19971027	-6.87	23	20020903	-4.15	32	20081015	-9.03	41	20090120	-5.28	50	20110810	-4.42
6	19871022	-3.92	15	19980804	-3.62	24	20030324	-3.53	33	20081022	-6.10	42	20090210	-4.91	51	20110818	-4.46
7	19871026	-8.28	16	19980827	-3.84	25	20080915	-4.71	34	20081105	-5.27	43	20090217	-4.56	52	20111109	-3.67
8	19871130	-4.18	17	19980831	-6.79	26	20080917	-4.71	35	20081106	-5.03	44	20090302	-4.66	53	20150824	-3.94
9	19871203	-3.53	18	20000104	-3.83	27	20080929	-8.81	36	20081112	-5.19	45	20090305	-4.25	54	20160624	-3.59

And interesting, you could probably win a lot of bets on the below statistic, there have been 43 Meltup (+3.5%) days in the 21st century vs only 35 Meltdown (-3.5%) days. If a year is not listed, it did not incur one. And in case there was any debate as to whether 2008 is the most volatile year since the 1930s, check it out.

NUMBER OF 3.5% DAILY MOVES BY YEAR (1967-2016)

YEAR	+3.5%	-3.5%	YEAR	+3.5%	-3.5%	YEAR	+3.5%	-3.5%
1970	1	0	1989	0	1	2003	1	1
1974	4	1	1991	1	1	2008	19	16
1978	1	0	1997	1	1	2009	6	6
1980	1	0	1998	4	3	2010	1	1
1982	3	1	1999	1	0	2011	3	5
1986	0	1	2000	2	2	2015	1	1
1987	3	6	2001	4	2	2016	0	1
1988	1	2	2002	8	2			

In summary, in the last 50 years, there have been just as many volatile days and months to the upside as there have to the downside, and I find this fact to be supportive of my thesis that S&P 'Out of Money' Puts are on balance, overpriced. I do want to state, it is my opinion, most of the MeltUps originated from conditions which were more anticipated than are meltdowns, such as the favorable resolutions to conflicts and geopolitical turmoil, and often the MeltUps come on the backside of Meltdowns. It is my perception that unanticipated Meltdowns occur much more often than 'unanticipated' Meltups. People and countries don't get unassasinated and the market doesn't Meltup because a plan to blow important building, which no one had prior knowledge of, never happened. Granted there is some justification for using Puts to protect against such unanticipated events, but simply my opinion, Puts are statistically overpriced, maybe not in the first decade of this century, but over a lifetime. And be careful about selling those 'Out of Money' S&P Calls, as a practice. You could probably, as often as not, make a case for buying them.