

AAII San Diego Options Trading SIG

Saturday July 22, 2023 @ 9:00am PT

Calendar Spreads

- Informal presentations to help you enhance your portfolio with options
- For addition to email list: Bruce Ennis, vicepresident@aaiisandiego.com
- Previous meetings: www.aaiisandiego.com/sub-groups/options-trading/

Flexible Meeting Fees

- Voluntary contributions pay for our expenses.
- Many generous, voluntary online contributions were made during COVID
- Thank You.
- Ways contribute:
 - Cash or check
 - https://www.paypal.com/donate/?hosted_button_id=2M5F9F7L4C2HU
 - Use this QR code



Presentation Outline

Review of Option Basics

Market Description

Relevant Market Statistics

SPY Calendar Spread

Why Options?

Options allow an investor to achieve a variety of objectives:

- Risk Reduction: protect stock holdings from a decline in market price (long puts).
- Generate income (calendars, credit spreads).
- Stock acquisition at a lower price (short puts).
- Market speculation at lower risk and greater reward (long calls).



What is an Option

- An option is a contract that is either bought or sold.
- One contract provides for buying or selling 100 shares of an underlying asset.
- The underlying asset is bought or sold at specified price, on or before a specified date.
- The specified price is the Strike Price
- The date is the Expiration Date
- An option exists as either a Call or a Put
 - *Stock can be Called Away*
 - *Stock can be Put up for sale*

Underlying Assets

- Stock (TSLA, AAPL, AMZN)
- ETF (SPY, QQQ, IWN)
- Index (SPX, VIX, RUT, NDX)
- Futures (/ES, /MES, /NQ)

The Market

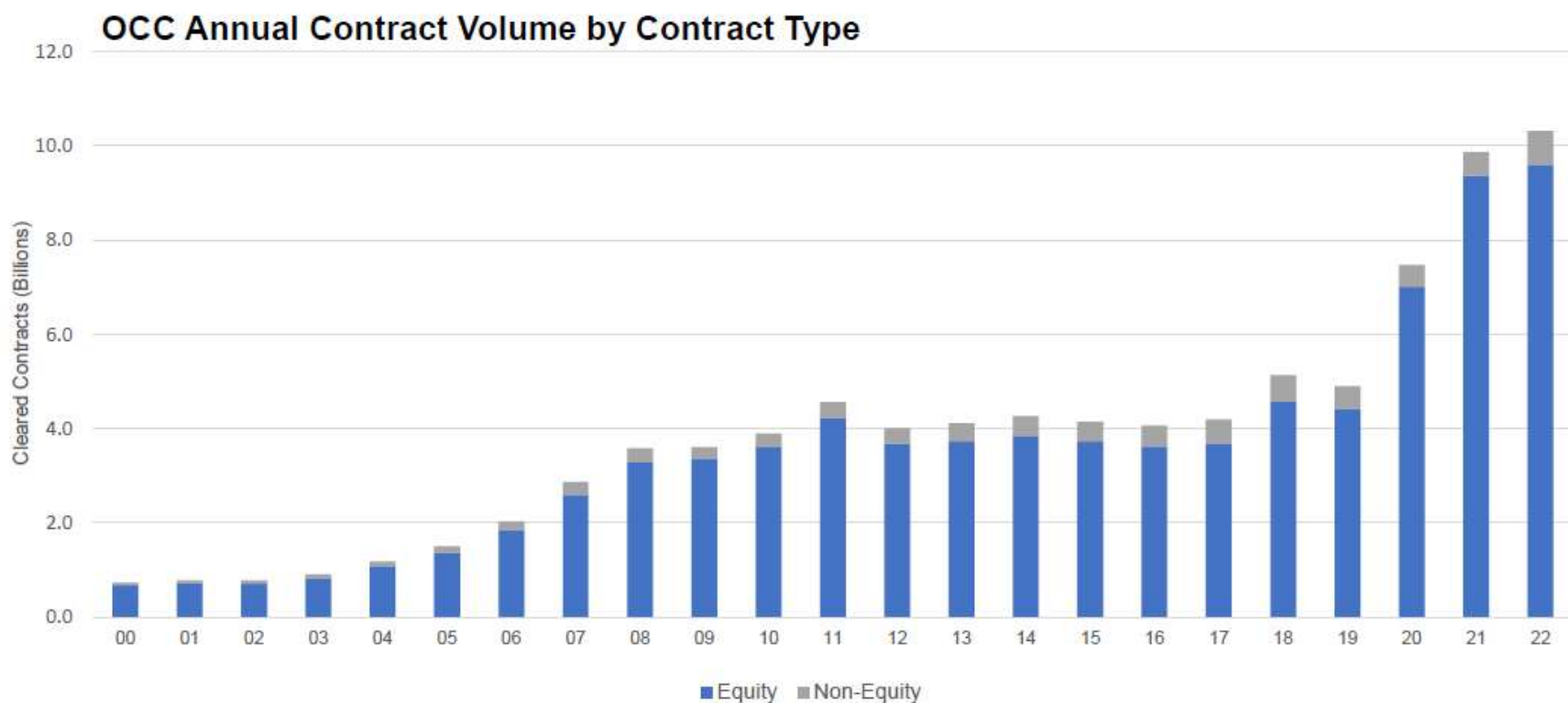
Options are traded through your **brokerage firm** at **Exchanges**. Trade transactions are cleared through the Options Clearing Corporation (**OCC**).

- Markets are fragmented, anonymous and 90% electronic.
- Every trade has a buyer and a seller, but one initiator.
- There is information in every quote and every trade.

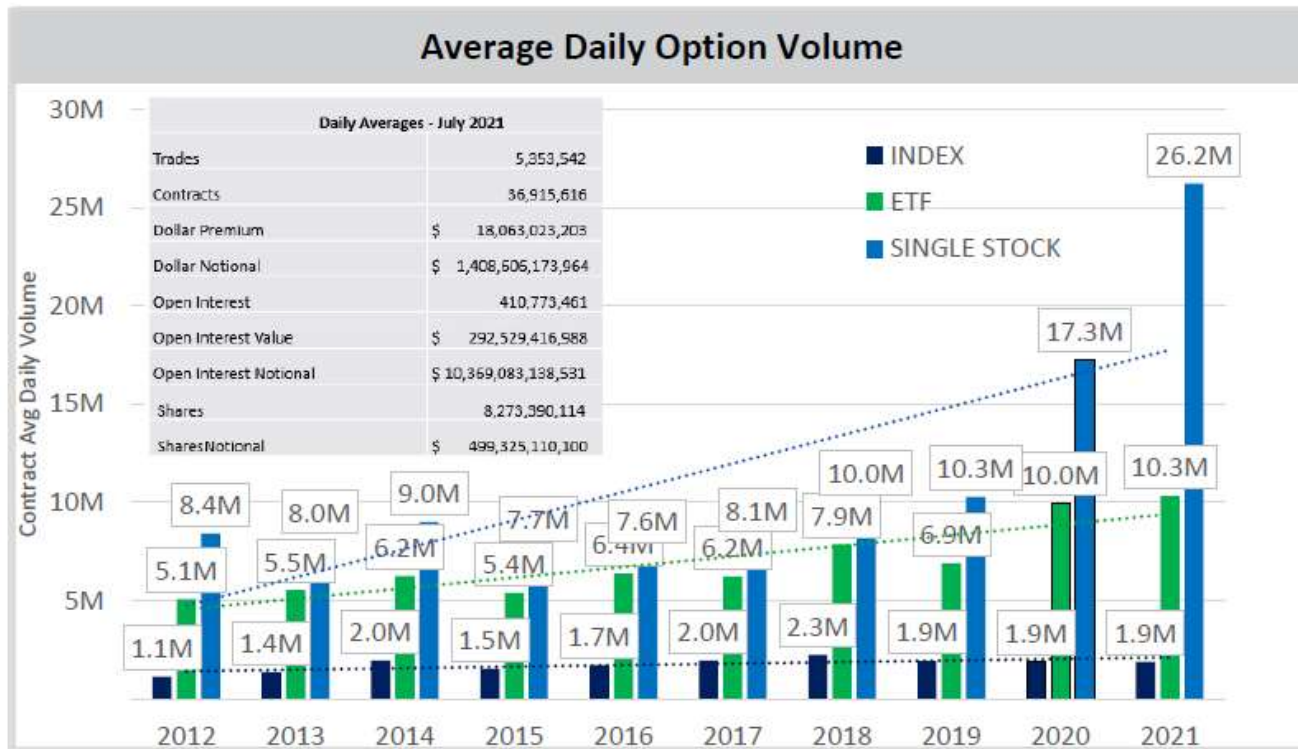
Options Clearing Corporation (OCC)

- Established in 1973
- Owned by the CBOE, AMEX, PHLX, PSE
- Regulated by the SEC
- Main role: to act as a performance guarantor for all options
- OCC increases option marketability and liquidity by enabling option buyers and sellers to terminate their positions in the market at any time (by making an offsetting transactions).

Annual Options Volume 2000-2022



Market Activity



Growth Index	
10yr	5.3%
5yr	-0.6%
1yr	-0.3%

ETF	
10yr	7.4%
5yr	10.7%
1yr	3.6%

Stock	
10yr	12.0%
5yr	26.4%
1yr	51.8%

Total	
10yr	10.2%
5yr	18.7%
1yr	31.9%

Volume & Option Statistics: SPY, SPX (7-19-23, 11:40am)

SPY	SPDR S&P500 ETF TRUST TR UNIT ETF	455.1121	+0.9221 +0.20%	B: 455.11 A: 455.12	ETB	NYSE	MM ±1.104	EXTO Eligible														
Underlying <table border="1"> <thead> <tr> <th>Last X</th> <th>Net Chng</th> <th>Bid X</th> <th>Ask X</th> <th>Size</th> <th>Volume</th> <th>Open</th> </tr> </thead> <tbody> <tr> <td>455.1121 D</td> <td>+0.9221</td> <td>455.11 Z</td> <td>455.12 P</td> <td>4 x 6</td> <td>44,790,764</td> <td>455.01</td> </tr> </tbody> </table>									Last X	Net Chng	Bid X	Ask X	Size	Volume	Open	455.1121 D	+0.9221	455.11 Z	455.12 P	4 x 6	44,790,764	455.01
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52 week IV Low:	0.131	Total Volume:	3,401,848	2,763,197	6,165,045																	
SPX	S&P 500 INDEX	4566.45	+11.47 +0.25%	B: 4565.83 A: 4567.17	MM ±5.546																	
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52 week IV High:	0.339	Trade Analysis	Calls	Puts	Total																	
52 week IV Low:	0.128	Total Volume:	1,025,339	1,336,155	2,361,494																	

Volume & Option Statistics: AAPL, TSLA (7-19-23, 11:40am)

AAPL		APPLE INC COM		194.895	+1.165 +0.60%	B: 194.89 A: 194.90	ETB	NASDAQ	MM ±1.523
Underlying									
>	Last X	Net Chng	Bid X	Ask X	Size	Volume	Open		
	194.895 D	+1.165	194.89 Q	194.90 Q	5 x 7	58,889,895	193.10		
Trade Grid									
Option Chain Filter: Off Spread: Single Layout: Position, Volume, Impl Vol, Theta, Delta									
Today's Options Statistics									
52 week IV High: 0.484		Trade Analysis		Calls		Puts		Total	
52 week IV Low: 0.177		Total Volume:		1,393,679		362,948		1,756,627	

TSLA		TESLA INC COM		291.3699	-1.9701 -0.67%	B: 291.33 A: 291.37	ETB	NASDAQ	MM ±20.671
Underlying									
>	Last X	Net Chng	Bid X	Ask X	Size	Volume	Open		
	291.3699 D	-1.9701	291.33 Q	291.37 Q	1 x 1	102,770,262	296.04		
Trade Grid									
Option Chain Filter: Off Spread: Single Layout: Position, Volume, Impl Vol, Theta, Delta									
Today's Options Statistics									
52 week IV High: 1.028		Trade Analysis		Calls		Puts		Total	
52 week IV Low: 0.484		Total Volume:		933,223		626,758		1,559,981	

Market Activity 7-19-23, 11:40am, PT

Vehicle	Volume	Total Options (calls & puts)
SPY	45M	6.2M
SPX	NA	2.4M
AAPL	59M	1.7M
TSLA	103M	1.6M

Different Types of Spreads

Vertical Spreads

Calendar (Horizontal)
Spread

Diagonal Spread

Calendar Spread

1. Uses calls or puts with **different** expirations but **same** strike.
2. Sell the near-term option, **buy** the longer-term option.
 - short strike in front month
 - long strike in back month
3. Both options are the same type (call or put).
4. The calendar spread has a short and long position
 - at the same strike
 - different expirations
5. Best used in a sideways market with low volatility.
6. Profit from time decay and increased implied volatility.

Trade Setup Parameters

- Strike
- Front Month Expiration
- Calendar Width: time between expirations

SPY Option Statistics on 7-19-23, 10am

SPY SPDR S&P500 ETF TRUST TR UNIT ETF 454.9801 +0.17% B: 454.98 A: 454.98 ETB NYSE ±1.317 EXTO Eligible									
Underlying									
Last X	Net Chng	Bid X	Ask X	Size	Volume	Open	High	Low	
454.9801 D	+0.7901	454.98 Q	454.99 Z	3 x 4	35,486,327	455.01	456.43	454.60	
Trade Grid									
Option Chain Filter: Off Spread: Single Layout: Position, Volume, Open Interest, Theta,...									
Today's Options Statistics									
52 week IV High: 0.336	Trade Analysis		Calls	Puts	Total	Sizzle Index			
52 week IV Low: 0.131	Total Volume:		2,631,358	2,108,035	4,739,393	Call Sizzle Index	2.636		
Current IV Percentile: 3%	Traded at BID or below:		1,155,481	1,004,371	2,159,851	Put Sizzle Index	1.606		
52 week HV High: 0.309	...% of total:		43%	47%	45%	Volatility Sizzle	0.993		
52 week HV Low: 0.091	Traded at ASK or above:		1,334,577	1,014,754	2,349,331	Stock Sizzle	0.483		
Current HV Percentile: 0%	...% of total:		50%	48%	49%	P/C Ratio	0.801		
Implied Volatility: 13.69%	Between the Market:		141,300	88,910	230,211				
VWAP: 455.699	...% of total:		5%	4%	4%				
Delta Between #									
	0 ... 20	676,351	25%	816,249	38%	1,492,600	31%		
	21 ... 40	728,952	27%	634,178	30%	1,363,130	28%		
	41 ... 60	851,137	32%	479,253	22%	1,330,390	28%		
	61 ... 80	297,953	11%	138,695	6%	436,648	9%		
	81 ... 100	76,965	2%	39,660	1%	116,625	2%		

SPY Option Chain

SPY SPDR S&P500 ETF TRUST TR UNIT ETF 455.15 +0.21% B: 455.14 A: 455.18 ETB NYSE ±1.307 EXTO Eligible										
Underlying										
	Last X	Net Chng	Bid X	Ask X	Size	Volume	Open	High	Low	
	455.15 D	+96	455.14 P	455.15 P	7 x 2	37,493,525	455.01	456.43	454.60	
Trade Grid										
Option Chain Filter: Off Spread: Single Layout: Position, Volume, Impl Vol, Theta, Delta										
>	19 JUL 23	(0)	100 (Weekly)							24.19% (±1.568)
>	20 JUL 23	(1)	100							14.87% (±2.986)
>	21 JUL 23	(2)	100							14.38% (±3.977)
>	24 JUL 23	(5)	100 (Weekly)							11.08% (±4.764)
>	25 JUL 23	(6)	100							11.57% (±5.439)
>	26 JUL 23	(7)	100 (Weekly)							13.05% (±6.618)
>	27 JUL 23	(8)	100							13.36% (±7.236)
>	28 JUL 23	(9)	100 (Weekly)							13.70% (±7.864)
>	31 JUL 23	(12)	100 (Weekly)							12.63% (±8.358)
>	1 AUG 23	(13)	100							12.58% (±8.662)
>	2 AUG 23	(14)	100 (Weekly)							12.79% (±9.136)
>	4 AUG 23	(16)	100 (Weekly)							13.51% (±10.312)
>	11 AUG 23	(23)	100 (Weekly)							13.53% (±12.37)
>	18 AUG 23	(30)	100							13.74% (±14.34)
>	25 AUG 23	(37)	100 (Weekly)							14.11% (±16.351)
>	1 SEP 23	(44)	100 (Weekly)							14.30% (±18.069)
>	15 SEP 23	(58)	100							15.35% (±22.271)
>	29 SEP 23	(72)	100 (Quarterly)							15.52% (±25.092)
>	20 OCT 23	(93)	100							16.46% (±30.261)

SPY Option Chain (2AUG and 18AUG expanded)

SPY SPDR S&P500 ETF TRUST TR UNIT ETF 455.12 +.93 +0.20% B: 455.12 A: 455.13 ETB NYSE ±1.302 EXTO Eligible															
Underlying															
Last X	Net Chng	Bid X	Ask X	Size	Volume	Open	High	Low							
455.12 H	+93	455.12 K	455.13 A	5 x 1	37,571,677	455.01	456.43	454.60							
Option Chain Filter: Off Spread: Single Layout: Position, Volume, Impl Vol, Theta, Delta															
CALLS										Strikes: 8	PUTS				
Position	Volume	Impl Vol	Theta	Delta	Bid X	Ask X	Exp	Strike	Bid X	Ask X	Position	Volume	Impl Vol	Theta	Delta
27 JUL 23 (8) 100 13.34% (±7.224)															
28 JUL 23 (9) 100 (Weeklys) 13.69% (±7.857)															
31 JUL 23 (12) 100 (Weeklys) 12.62% (±8.351)															
1 AUG 23 (13) 100 12.58% (±8.661)															
2 AUG 23 (14) 100 (Weeklys) 12.79% (±9.135)															
	8	12.30%	-.18	.64	6.48 T	6.50 T	2 AUG 23	452	2.48 T	2.49 T		2	11.48%	-.12	-.35
	19	12.11%	-.18	.60	5.81 T	5.82 T	2 AUG 23	453	2.81 T	2.82 N		30	11.33%	-.12	-.39
	50	11.96%	-.18	.57	5.18 T	5.19 T	2 AUG 23	454	3.19 T	3.20 T		304	11.22%	-.12	-.43
	166	11.82%	-.17	.53	4.59 Z	4.60 P	2 AUG 23	455	3.61 Z	3.62 T		373	11.11%	-.12	-.47
	83	11.69%	-.17	.49	4.04 T	4.05 T	2 AUG 23	456	4.07 T	4.08 T		352	11.01%	-.12	-.51
	306	11.56%	-.17	.46	3.53 T	3.54 N	2 AUG 23	457	4.57 Z	4.59 T		7	10.91%	-.12	-.55
	39	11.47%	-.16	.42	3.07 T	3.08 T	2 AUG 23	458	5.12 T	5.14 T		65	10.82%	-.11	-.60
	127	11.38%	-.16	.38	2.65 Z	2.66 T	2 AUG 23	459	5.72 T	5.74 T		19	10.75%	-.10	-.64
4 AUG 23 (16) 100 (Weeklys) 13.50% (±10.303)															
11 AUG 23 (23) 100 (Weeklys) 13.52% (±12.36)															
18 AUG 23 (30) 100 13.73% (±14.329)															
	16,890	13.50%	-.14	.65	10.65 T	10.67 T	18 AUG 23	450	3.46 X	3.47 Z		32,950	11.87%	-.08	-.33
	5,488	13.09%	-.14	.61	9.22 T	9.24 T	18 AUG 23	452	4.05 T	4.06 Z		4,127	11.56%	-.08	-.38
	8,543	12.72%	-.13	.57	7.89 T	7.91 P	18 AUG 23	454	4.75 Z	4.76 T		4,426	11.29%	-.08	-.43
	17,242	12.55%	-.13	.54	7.27 T	7.28 T	18 AUG 23	455	5.14 W	5.16 P		14,240	11.16%	-.08	-.46
	5,794	12.38%	-.13	.52	6.67 T	6.68 T	18 AUG 23	456	5.57 T	5.58 T		6,035	11.04%	-.08	-.49
	8,268	12.08%	-.12	.47	5.56 X	5.57 N	18 AUG 23	458	6.51 T	6.52 N		1,879	10.81%	-.07	-.55
	23,724	11.84%	-.12	.42	4.58 Z	4.59 P	18 AUG 23	460	7.59 T	7.61 T		2,703	10.62%	-.07	-.61
	10,890	11.61%	-.11	.36	3.71 X	3.72 Z	18 AUG 23	462	8.81 T	8.83 T		209	10.45%	-.06	-.67

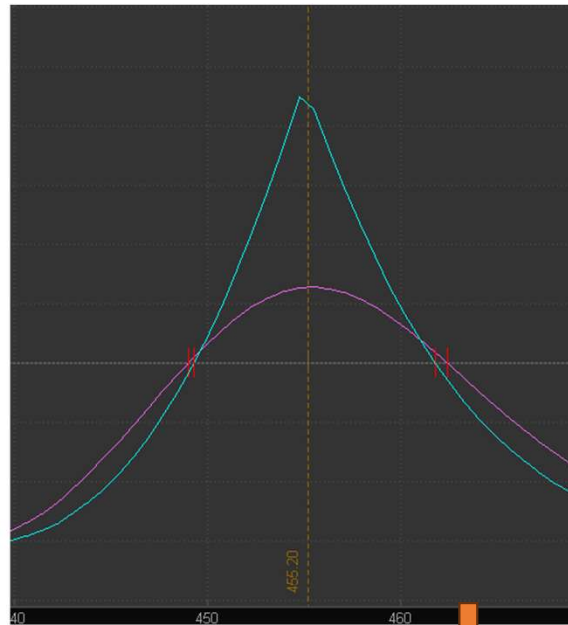
SPY 1 and 30 DTE, ATM Puts SPY @455

Strikes: 8		PUTS							
Exp	Strike	Bid X	Ask X	Position	Volume	Impl Vol	Theta	Delta	
								13.36% (±7.237)	
								13.72% (±7.876)	
								12.63% (±8.357)	
								12.59% (±8.667)	
								12.80% (±9.142)	
2 AUG 23	451	2.26 T	2.27 T		56	11.60%	-12	-33	
2 AUG 23	452	2.57 Z	2.58 T		2	11.47%	-12	-36	
2 AUG 23	453	2.91 T	2.92 P		30	11.32%	-12	-40	
2 AUG 23	454	3.30 T	3.31 T		268	11.21%	-12	-44	
2 AUG 23	455	3.73 T	3.74 Z		325	11.10%	-12	-48	
2 AUG 23	456	4.20 T	4.22 T		352	11.00%	-12	-52	
2 AUG 23	457	4.72 T	4.73 T		7	10.90%	-12	-56	
2 AUG 23	458	5.28 T	5.29 N		60	10.81%	-11	-61	
								13.51% (±10.31)	
								13.53% (±12.365)	
								13.74% (±14.334)	
18 AUG 23	448	3.03 T	3.04 T		4,595	12.17%	-08	-30	
18 AUG 23	450	3.54 T	3.55 N		32,460	11.85%	-08	-34	
18 AUG 23	452	4.14 W	4.15 N		3,977	11.54%	-08	-39	
18 AUG 23	454	4.86 T	4.87 T		4,418	11.28%	-08	-44	
18 AUG 23	455	5.26 P	5.27 N		14,075	11.15%	-08	-47	
18 AUG 23	456	5.69 P	5.70 T		5,768	11.03%	-08	-50	
18 AUG 23	458	6.65 P	6.67 T		1,873	10.81%	-07	-56	
18 AUG 23	460	7.75 T	7.77 T		2,702	10.62%	-07	-62	

Selected strikes for trade analysis



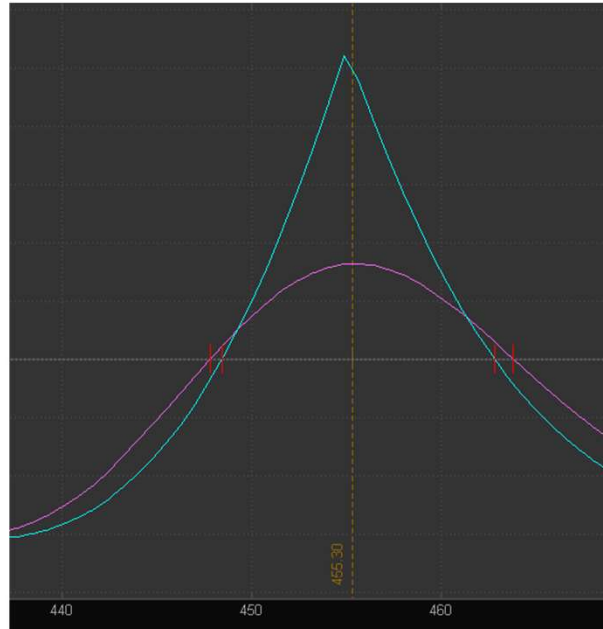
SPY Put Calendar (at Day 10)



Theta: 13.15
 Date: 7-29-23, Day = 10
 Volatility adjustment = 0.00%
 P/L = \$63.59 (132X)

Price Slices												
Stk Price	Offset	Delta	Gamma	Theta	Vega	P/L Open	P/L Day	BP Effect				
455.16	\$0	.92	-3.42	13.15	22.00	\$63.59	\$63.59	\$0.00				
Positions and Simulated Trades												
Model: Bjerkund-Stensland Interest: 5.00% Date: 07/29/2023												
Symbol	Side	Qty	Symbol	Exp	Strike	Type	Price	Yield	Vol	Vol Adj	Delta	BP Effect
SPY	STK	0	SPY			ETF	.00	1.44%	13.73%	0.00%	.00	\$0.00
SPY	CALENDAR	SELL	SPY	2 AUG 23 (Week)	455	PUT	1.54	0.18%	11.40%	0.00%	.80	\$0.00
SPY	BUY	+1	SPY	18 AUG 23	455	PUT	DEBIT	-0.12%	11.63%	0.00%		\$0.00
Stock Price: 455.16 More parameters												

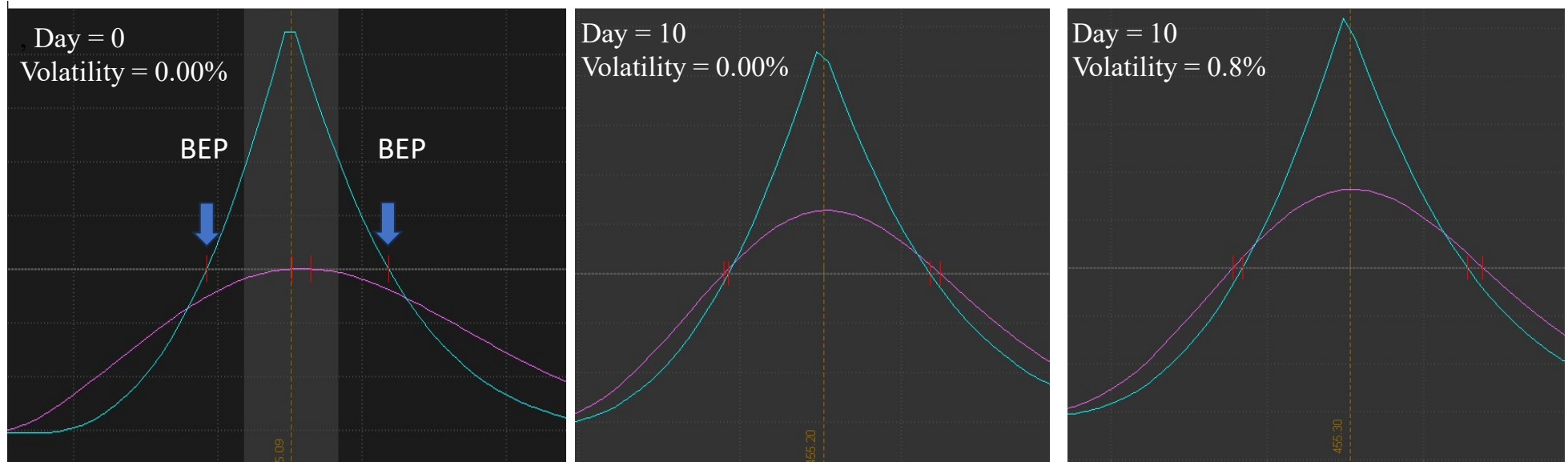
SPY Put Calendar (at Day 10 with volatility increase)



Theta: 14.09
 Date: 7-29-23, Day = 10
 Volatility adjustment = 0.80%
 P/L = \$81.62 (170X)

Price Slices													
Stk Price	Offset	Delta	Gamma	Theta	Vega	P/L Open	P/L Day	BP Effect					
455.31	\$0	.43	-3.19	14.09	22.04	\$81.62	\$81.62	\$0.00					
Positions and Simulated Trades													
Model: Bjerkund-Stensland Interest: 5.00% Date: 07/29/2023													
SPY	STK	Side	Qty	Symbol	Exp	Strike	Type	Price	Yield	Vol	Vol Adj	Delta	BP Effect
✓	SPY	SELL	0	SPY			ETF	.00	1.44%	14.53%	+0.80%	.00	\$0.00
✓	CALENDAR	SELL	-1	SPY 2 AUG 23 (Week)	455		PUT	1.54	0.18%	12.20%	+0.80%	.62	(\$5,432.72)
		BUY	+1	SPY 18 AUG 23	455		PUT	DEBIT	-0.12%	12.43%	+0.80%		\$5,432.72

Calendar spreads profit from: 1) time decay and 2) increased volatility
if the underlying price remains between the BEPs.



Market Wizard Lessons*

- 1. There Is No Single True Path**
- 2. Find a Trading Method that is Compatible with Your Personality**
- 3. Keep a Trading Journal**
- 4. Learn from Your Mistakes**
- 5. Risk Management is Critical**
- 6. Trade Small, Often and Consistently**
- 7. If You Hope a Trade Will Work: Get Out (*hopium is bad*)**
- 8. Emotions Are Detrimental to Trading**
- 9. Aiming for Consistent Profitability Can Be Counterproductive**
- 10. Successful Traders Love What They Do**

* From Jack D. Schwager, *Unknown Market Wizards*