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United Ethos Wealth Partners

Exploring Short Dated Index Option Straddle Pricing

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Exploring Short Dated Index Option Straddle Pricing

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Outline

- Index Option Markets
- Data Method
- Straddle Pricing History
- Applications Of Straddle History
- Questions / Contact

Index Option Markets

- S&P 500 (SPX)
- Notional = \$410,900 (3/31)
- Daily PM Settlement
- Alternatives XSP, ETFs
- Nadaq-100 (NDX)
- Notional = \$1,284,600
- Daily PM Settlement Except Third Friday
- Alternatives XND, ETFs

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Data Sources: Cboe LiveVol & United Ethos Calculations

Methods

- Pricing for all PM settlements starting with January 2022 – March 2023
- Tracked 1-day to 5-day ATM straddles for both markets
- Straddle pricing uses the midpoint of the bid-ask spread
- Hypothetical performance includes \$2 slippage for each observation
- Dates are the option expiration date, not the trade execution date

Straddle Price History – SPX

	Long SPX ATM Straddle Summary				
	1 Day	2 Day	3 Day	4 Day	5 Day
Best	125.97	189.32	284.97	320.87	326.02
Worst	-77.93	-117.28	-104.07	-130.34	-146.14
Average	-1.99	+2.01	-0.07	-1.73	-3.39

	Short SPX ATM Straddle Summary				
	1 Day	2 Day	3 Day	4 Day	5 Day
Best	73.93	113.28	100.07	126.34	142.14
Worst	-129.97	-193.32	-288.97	-324.87	-330.02
Average	-2.01	-6.01	-3.93	-2.27	-0.61

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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Long and Short ATM SPX Straddle Win Percent					
	1 Day	2 Day	3 Day	4 Day	5 Day
Long Win %	42.91%	46.10%	41.84%	43.26%	43.26%
Short Win %	53.90%	50.71%	56.38%	54.96%	54.26%

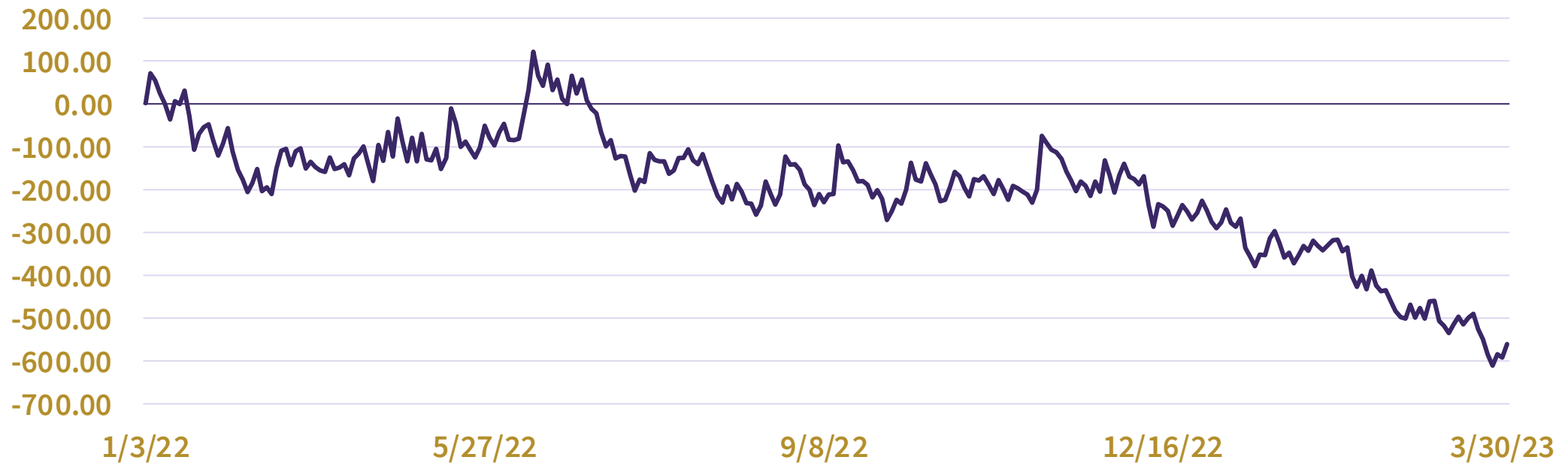
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Long 1 Day SPX ATM Straddle



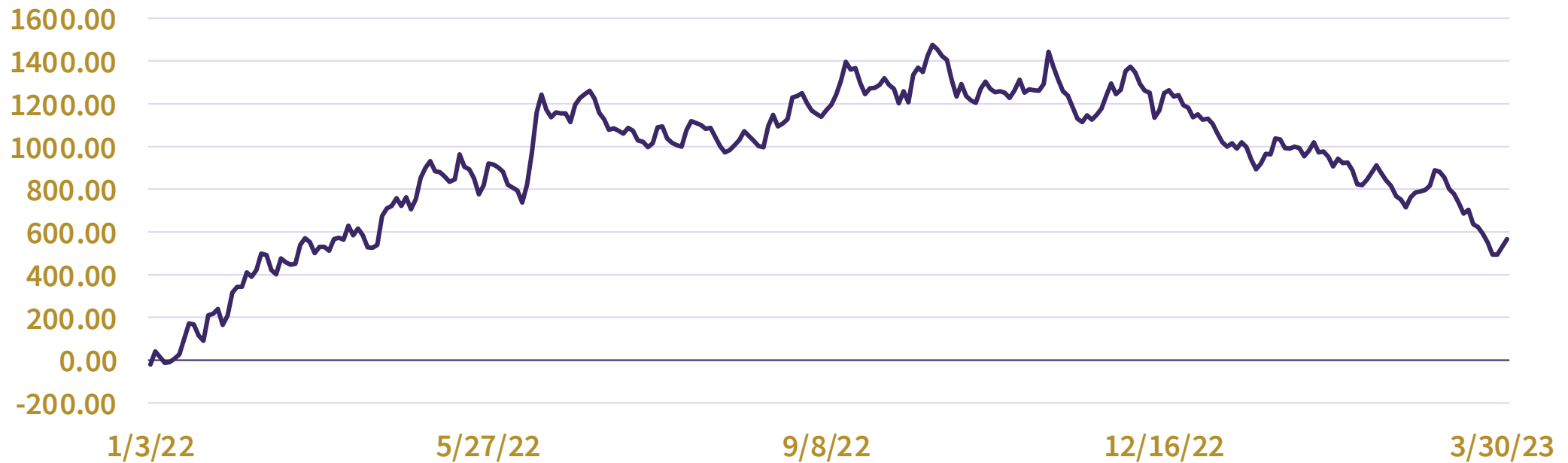
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Long 2 Day SPX ATM Straddle



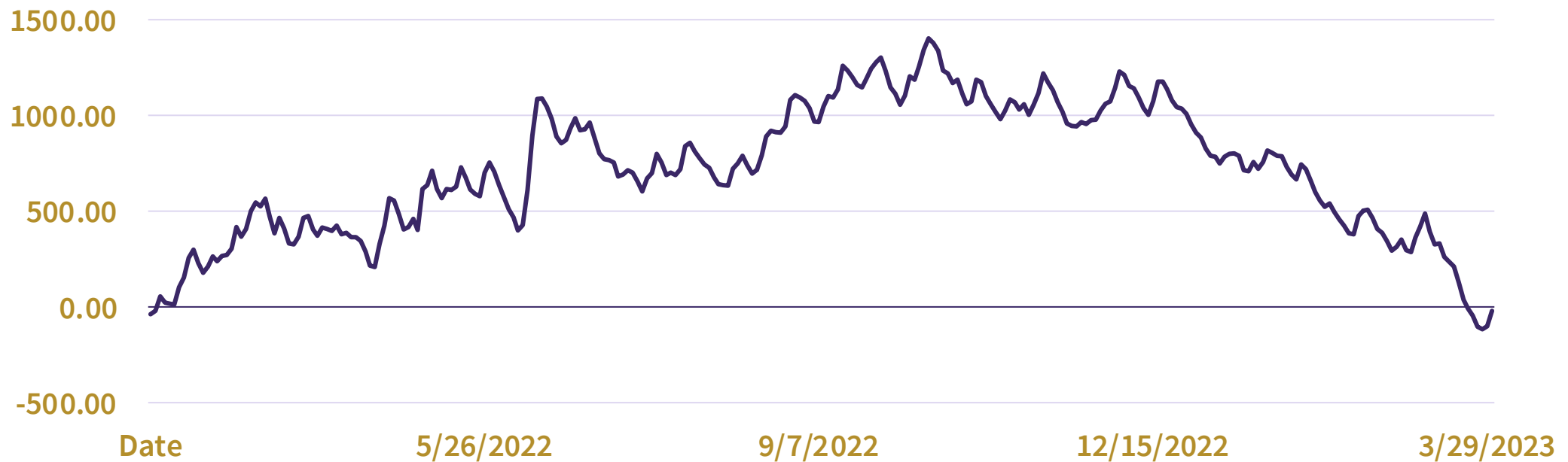
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Long 3 Day SPX ATM Straddle



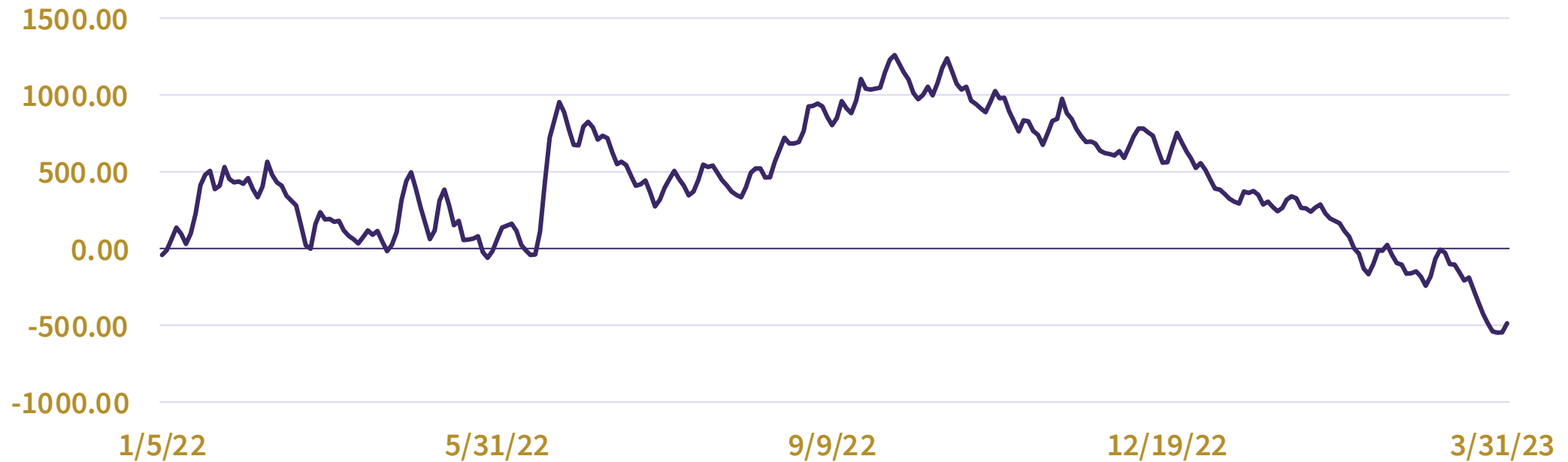
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Long 4 Day SPX ATM Straddle



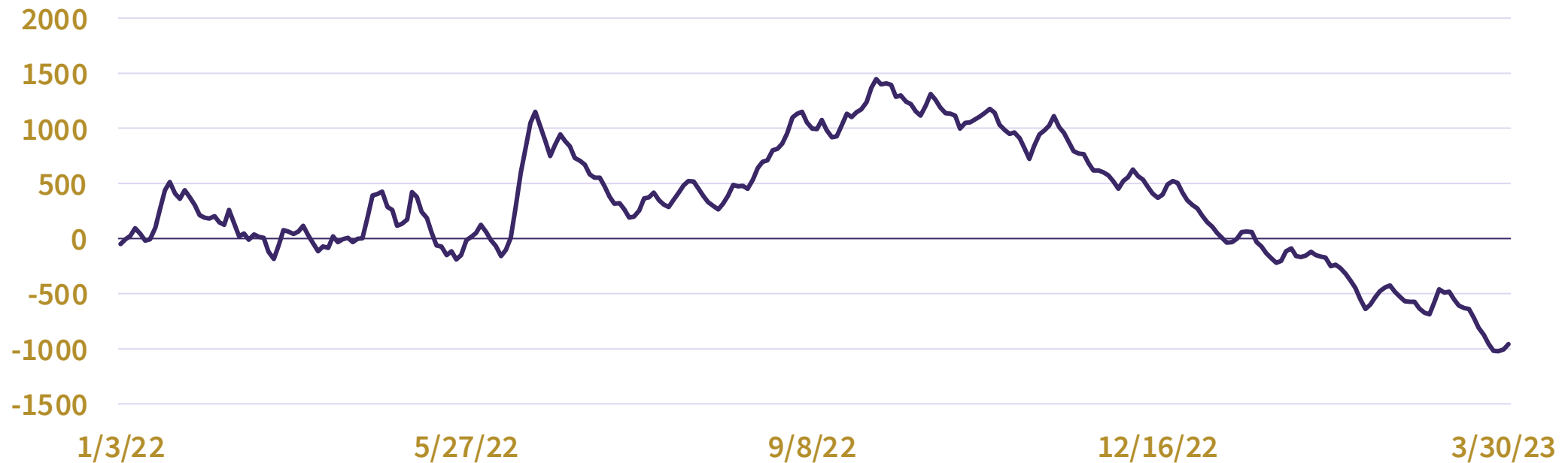
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Long 5 Day SPX ATM Straddle



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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Short 1 Day SPX ATM Straddle



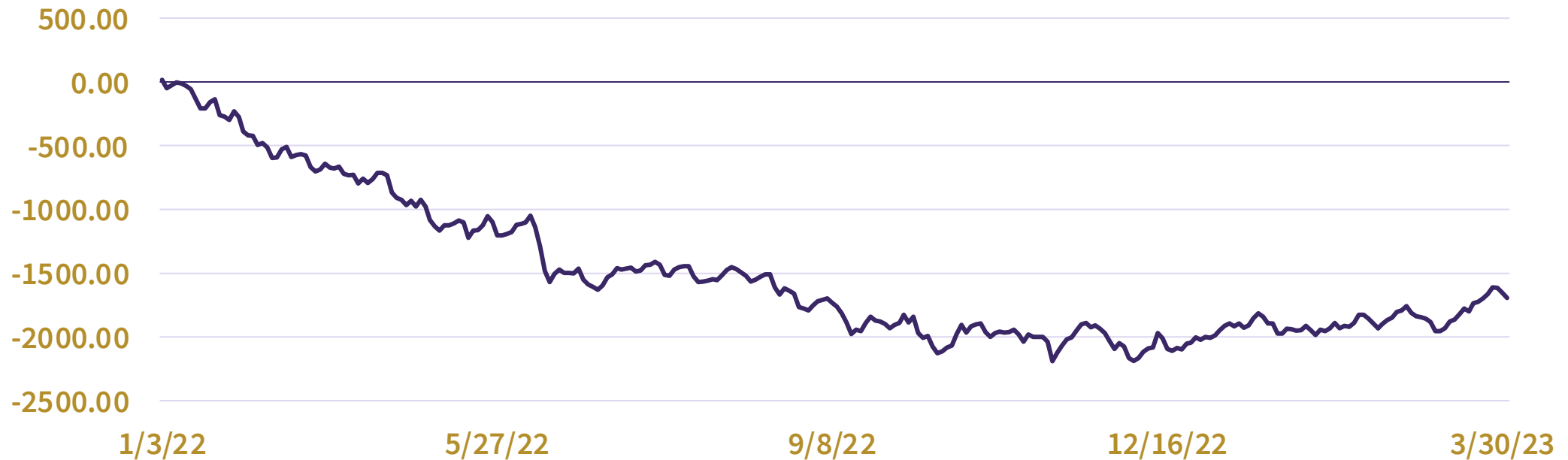
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Short 2 Day SPX ATM Straddle



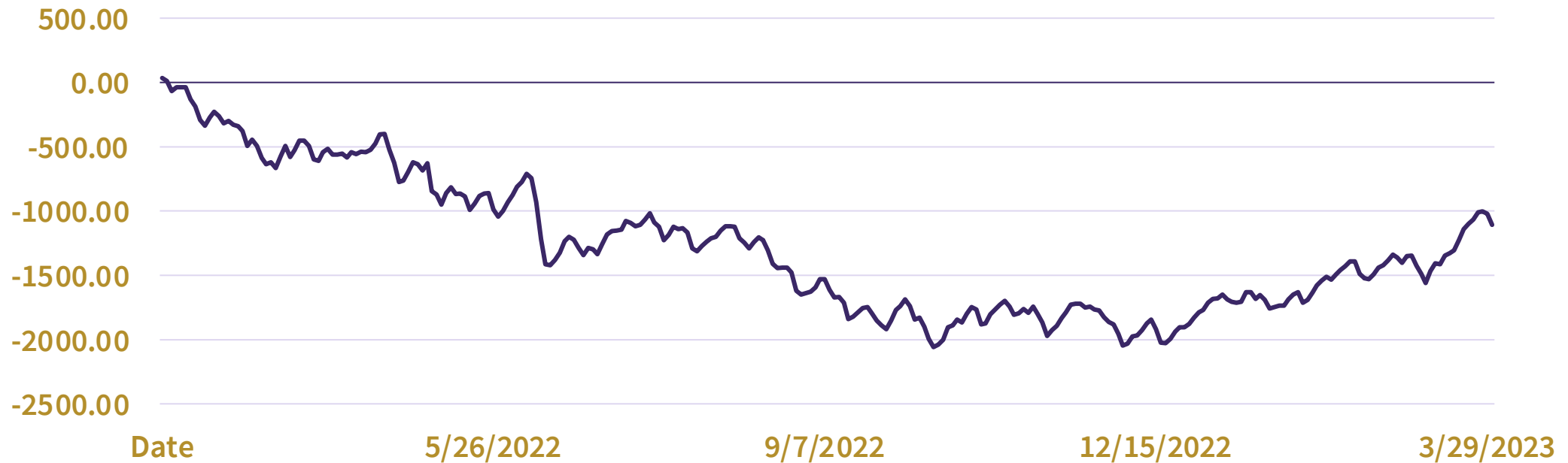
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Short 3 Day SPX ATM Straddle



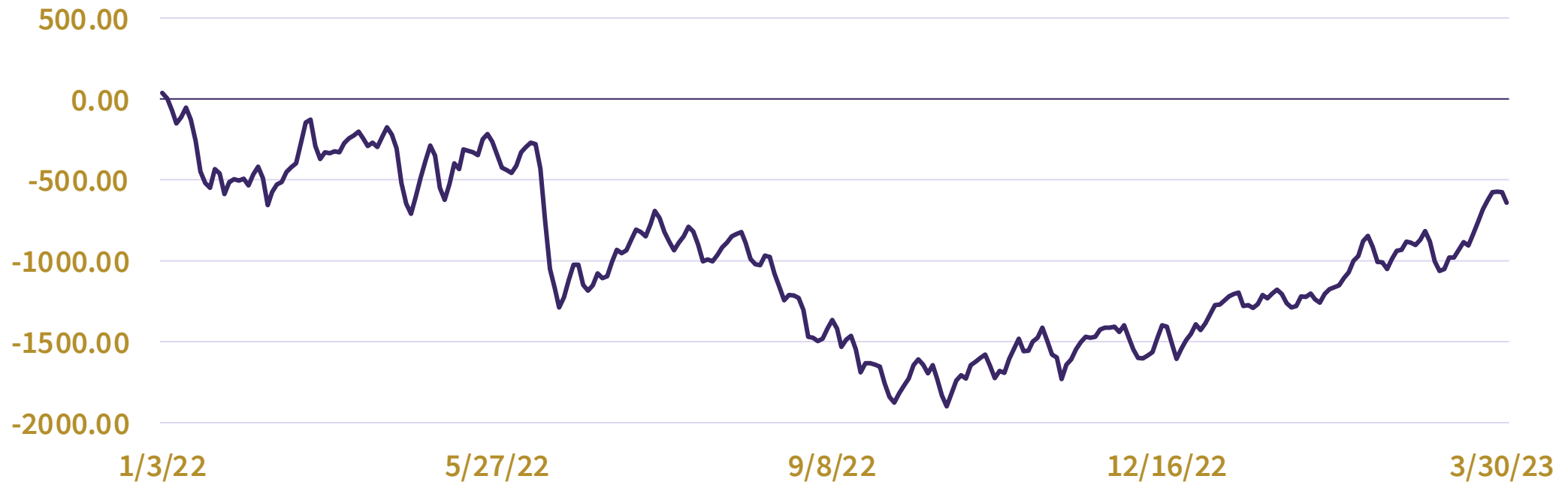
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Short 4 Day SPX ATM Straddle



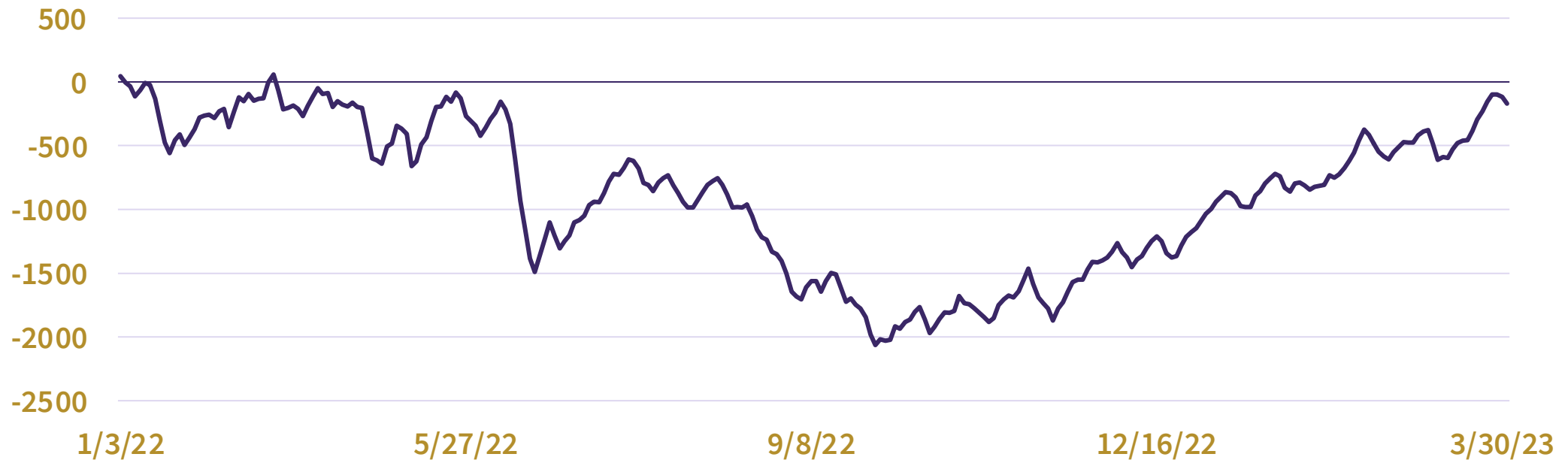
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Short 5 Day SPX ATM Straddle



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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Long SPX ATM Straddle P/L By Quarter					
	1 Day	2 Day	3 Day	4 Day	5 Day
Q1 2022	-124.62	566.23	397.09	118.13	34.26
Q2 2022	112.95	658.17	565.10	616.52	696.58
Q3 2022	-221.61	33.88	150.29	364.84	662.02
Q4 2022	-15.40	-129.24	-203.16	-650.74	-1184.13
Q1 2023	-312.24	-562.15	-930.04	-935.31	-1165.79
Total	-560.92	566.89	-20.72	-486.56	-957.06

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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

Short SPX ATM Straddle P/L By Quarter					
	1 Day	2 Day	3 Day	4 Day	5 Day
Q1 2022	-31.38	-722.23	-553.09	-274.13	-190.26
Q2 2022	-328.95	-874.17	-781.10	-832.52	-912.58
Q3 2022	-34.39	-289.88	-406.29	-620.84	-918.02
Q4 2022	-236.60	-122.76	-48.84	398.74	932.13
Q1 2023	64.24	314.15	682.04	687.31	917.79
Total	-567.08	-1694.89	-1107.28	-641.44	-170.94

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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – SPX

SPX ATM Straddle Pricing As A % Of Underlying					
	1 Day	2 Day	3 Day	4 Day	5 Day
Max	2.39%	3.02%	3.50%	3.71%	4.14%
Min	0.48%	0.65%	0.79%	0.92%	1.02%
Avg	1.12%	1.60%	1.96%	2.24%	2.50%

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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Long NDX ATM Straddle Summary					
	1 Day	2 Day	3 Day	4 Day	5 Day
Best	859.21	681.65	1016.03	1063.73	1102.79
Worst	-337.64	-420.68	-439.10	-526.61	-615.34
Average	10.75	21.70	7.65	-1.80	-6.39

Short NDX ATM Straddle Summary					
	1 Day	2 Day	3 Day	4 Day	5 Day
Best	333.64	416.68	435.10	522.61	611.34
Worst	-863.21	-685.65	-1020.03	-1067.73	-1106.79
Average	-14.75	-25.70	-11.65	-2.20	2.39

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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Long and Short ATM NDX Straddle Win Percent					
	1 Day	2 Day	3 Day	4 Day	5 Day
Long Win %	46.44%	46.03%	46.86%	41.00%	45.19%
Short Win %	52.72%	52.72%	52.72%	57.74%	54.81%

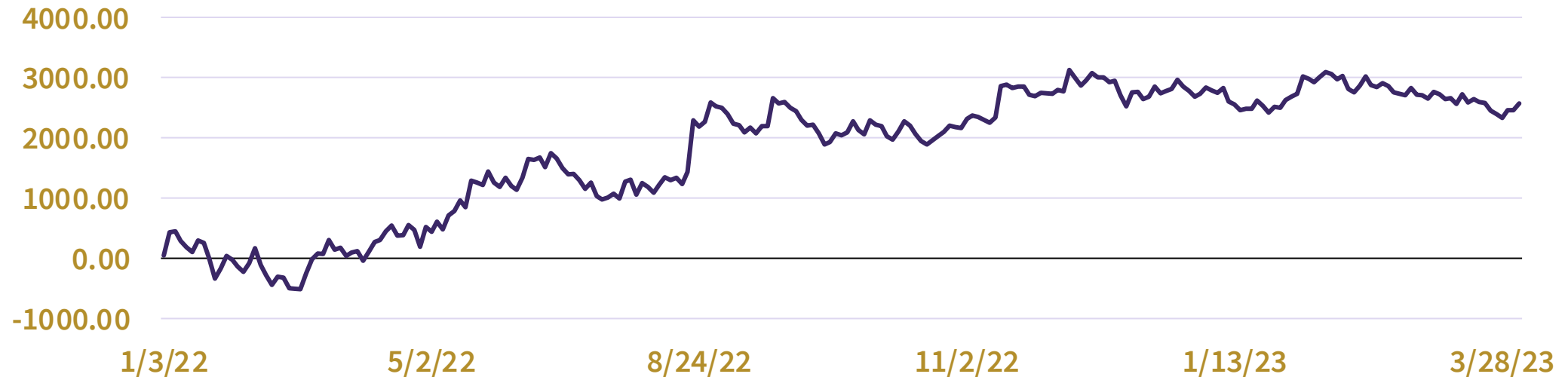
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Long 1 Day NDX ATM Straddle



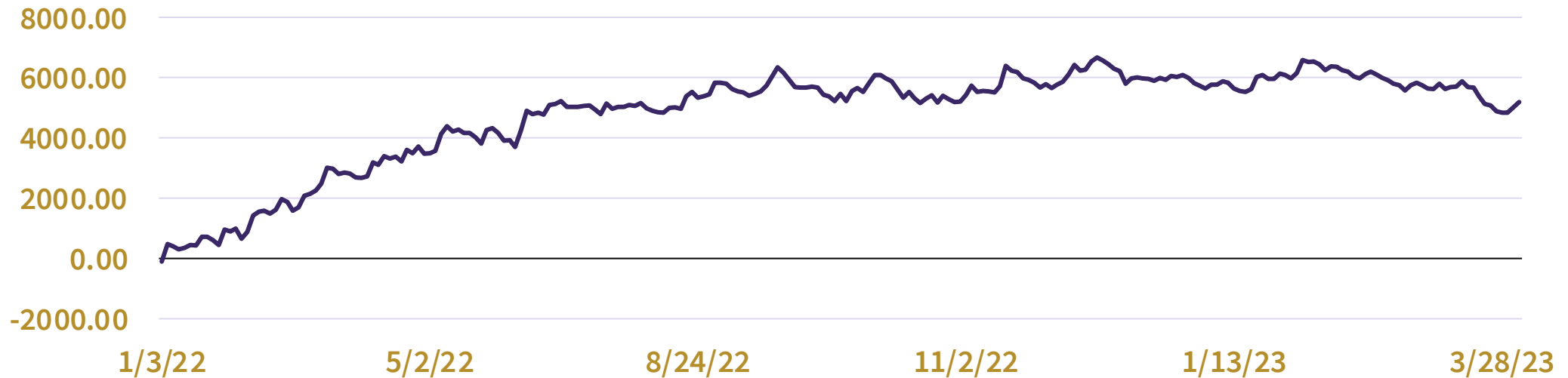
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Straddle Price History – NDX

Long 2 Day NDX ATM Straddle



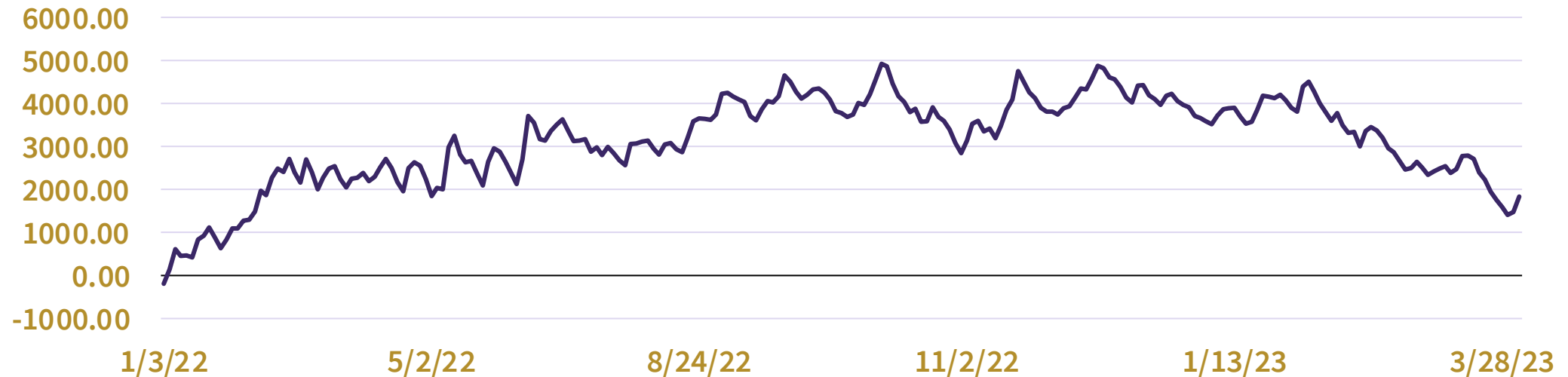
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Long 3 Day NDX ATM Straddle



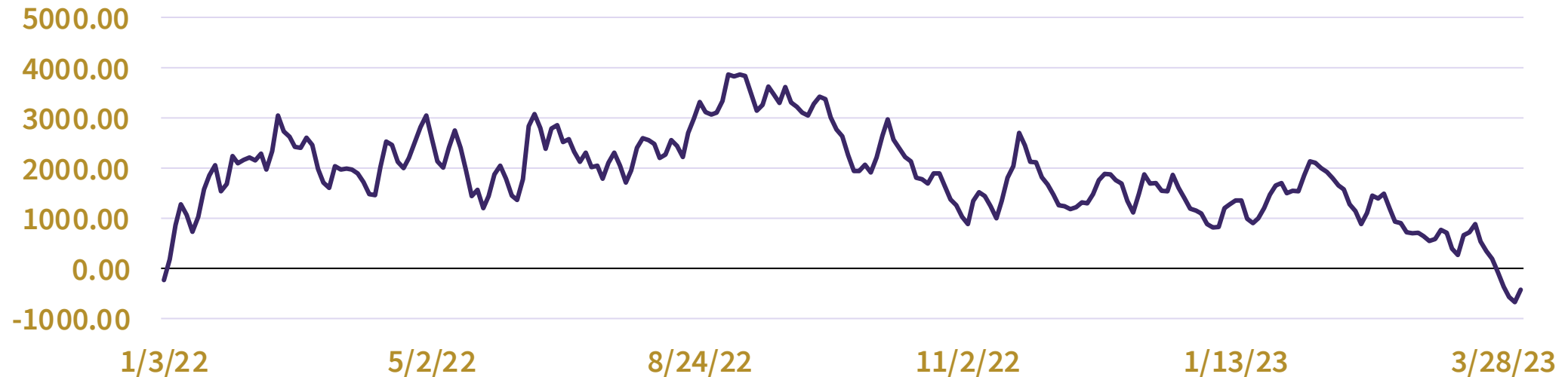
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Long 4 Day NDX ATM Straddle



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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Long 5 Day NDX ATM Straddle



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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Short 1 Day NDX ATM Straddle



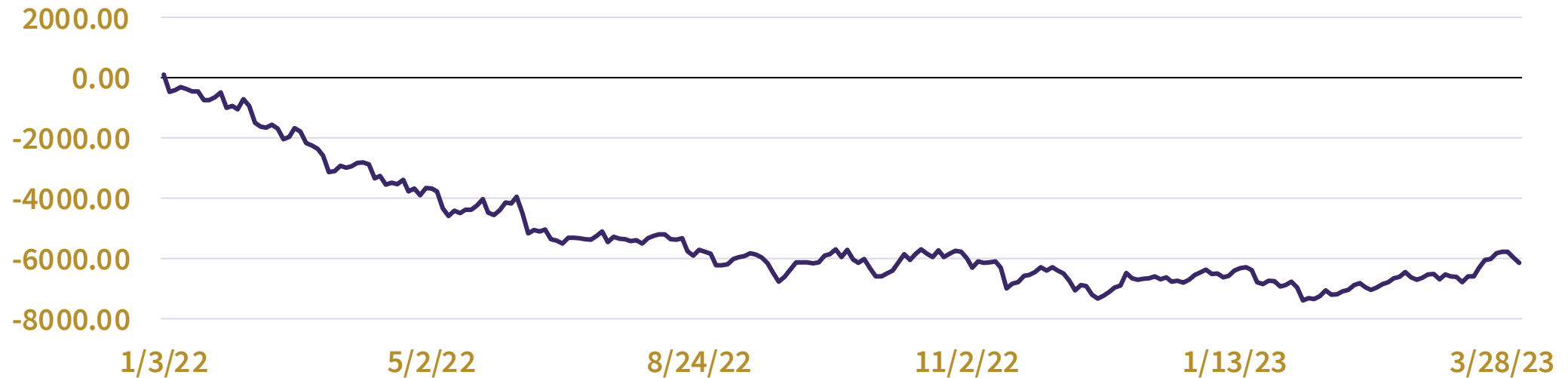
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Straddle Price History – NDX

Short 2 Day NDX ATM Straddle



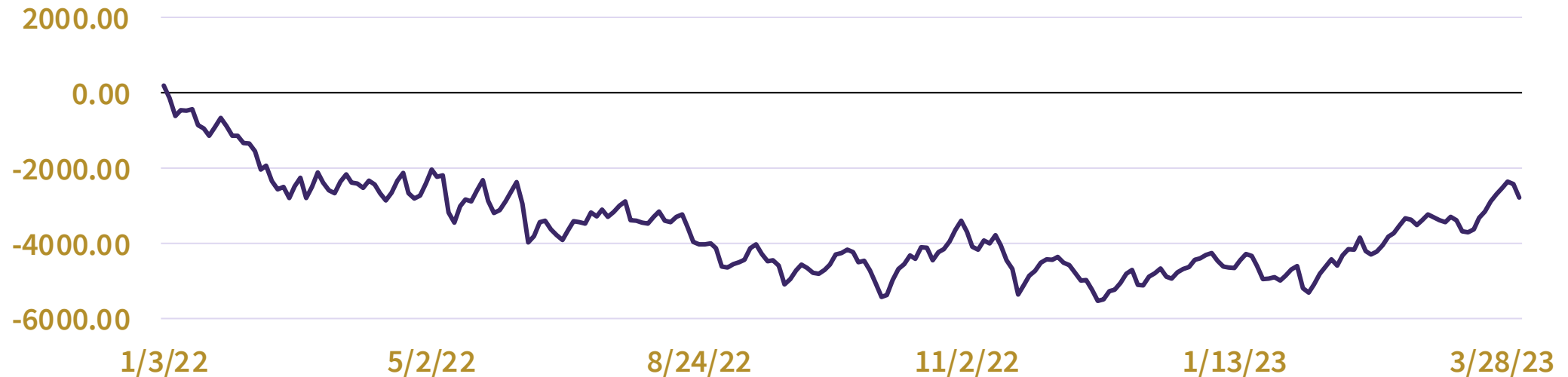
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Short 3 Day NDX ATM Straddle



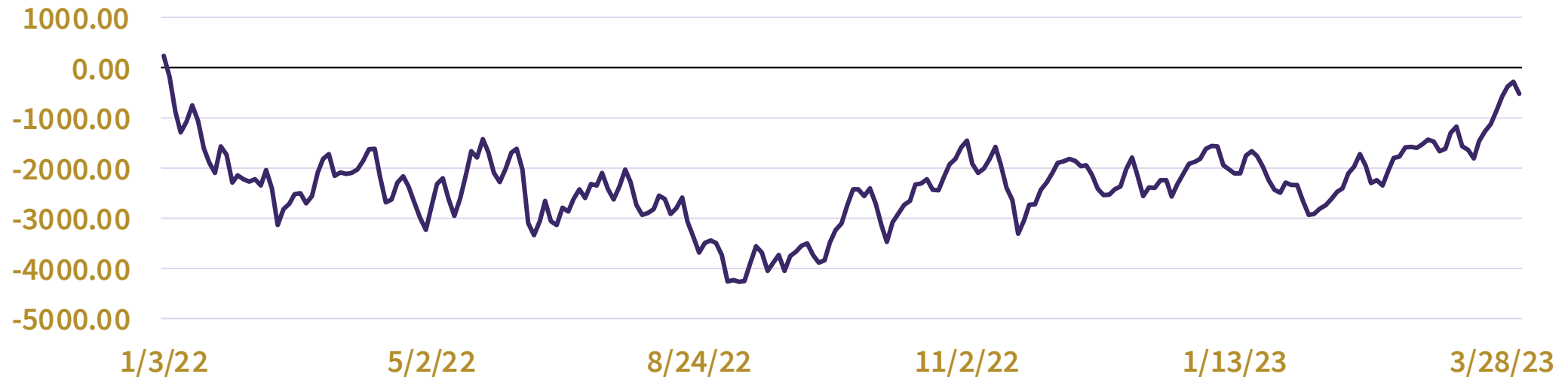
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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Short 4 Day NDX ATM Straddle



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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Short 5 Day NDX ATM Straddle



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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Long NDX Straddle P/L By Quarter					
	1 Day	2 Day	3 Day	4 Day	5 Day
Q1 2022	121.24	2685.44	2275.94	1893.91	1708.67
Q2 2022	1372.49	2542.60	1351.85	618.29	1118.90
Q3 2022	547.43	239.25	150.68	116.33	629.85
Q4 2022	810.15	620.37	184.78	-1226.14	-2612.42
Q1 2023	-282.68	-902.39	-2134.22	-1832.46	-2371.69
Total	2568.63	5185.27	1829.03	-430.07	-1526.69

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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

Short NDX Straddle P/L By Quarter					
	1 Day	2 Day	3 Day	4 Day	5 Day
Q1 2022	-261.24	-2825.44	-2415.94	-2033.91	-1848.67
Q2 2022	-1516.49	-2686.60	-1495.85	-762.29	-1262.90
Q3 2022	-743.43	-435.25	-346.68	-312.33	-825.85
Q4 2022	-1050.15	-860.37	-424.78	986.14	2372.42
Q1 2023	46.68	666.39	1898.22	1596.46	2135.69
Total	-3524.63	-6141.27	-2785.03	-525.93	570.69

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Data Sources: Cboe LiveVol & United Ethos Calculations

Straddle Price History – NDX

NDX ATM Straddle Pricing As A % Of Underlying					
	1 Day	2 Day	3 Day	4 Day	5 Day
Max	2.39%	3.02%	3.50%	3.71%	4.14%
Min	0.48%	0.65%	0.79%	0.92%	1.02%
Avg	1.12%	1.60%	1.96%	2.24%	2.50%

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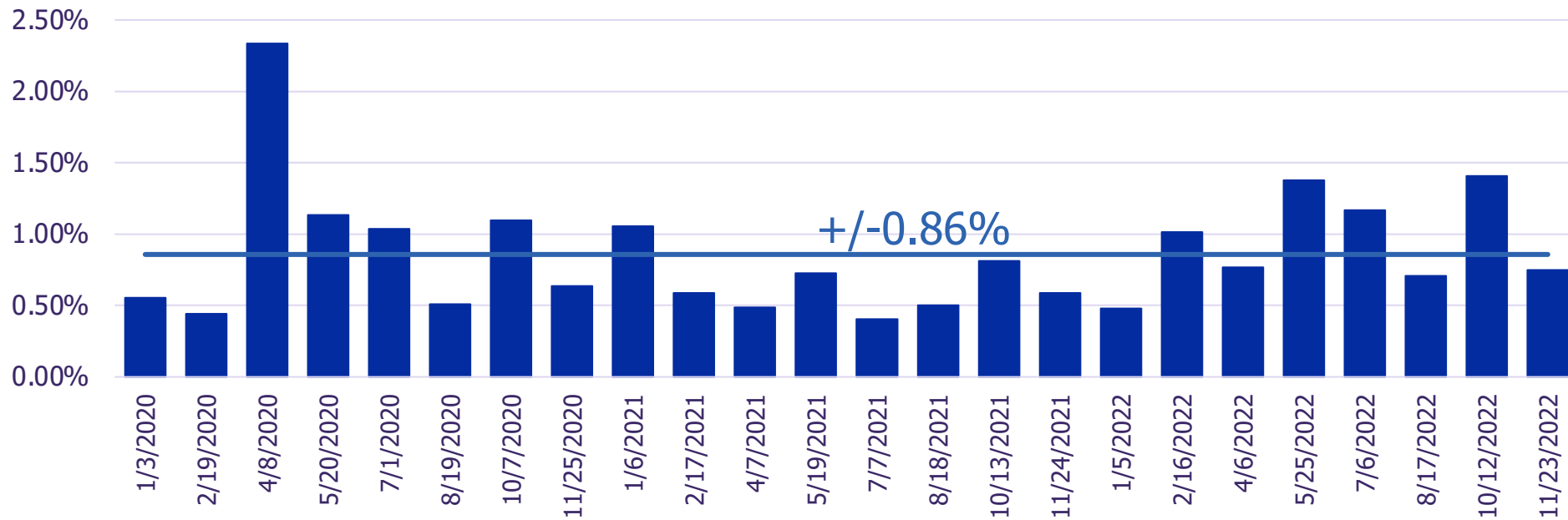
Data Sources: Cboe LiveVol & United Ethos Calculations

Applying The Data

- We have been closely tracking the pricing of straddles before and after major economic events
- This is shared at russellroads.substack.com the Sunday before FOMC, CPI, and the Employment report.

Applying The Data

SPX FOMC Minutes 1-Day Straddle



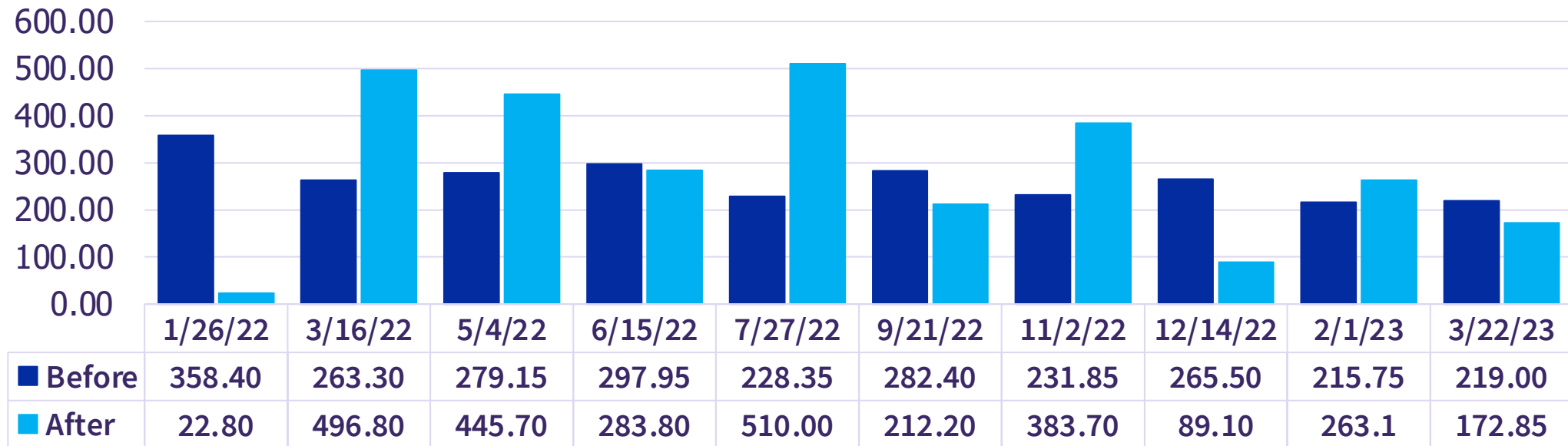
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Data Sources: Cboe LiveVol & United Ethos Calculations

Applying The Data

NDX ATM Straddle Before And After FOMC Announcements



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Data Sources: Cboe LiveVol & United Ethos Calculations

Questions / Contact

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Suggestions?

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