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August 17, 2023

Cboe

Trends and Trades in US Options Markets

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Engagement
Cboe Global Markets

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Trends and Trades in Listed Options

August 2023

PART 1: TRENDS

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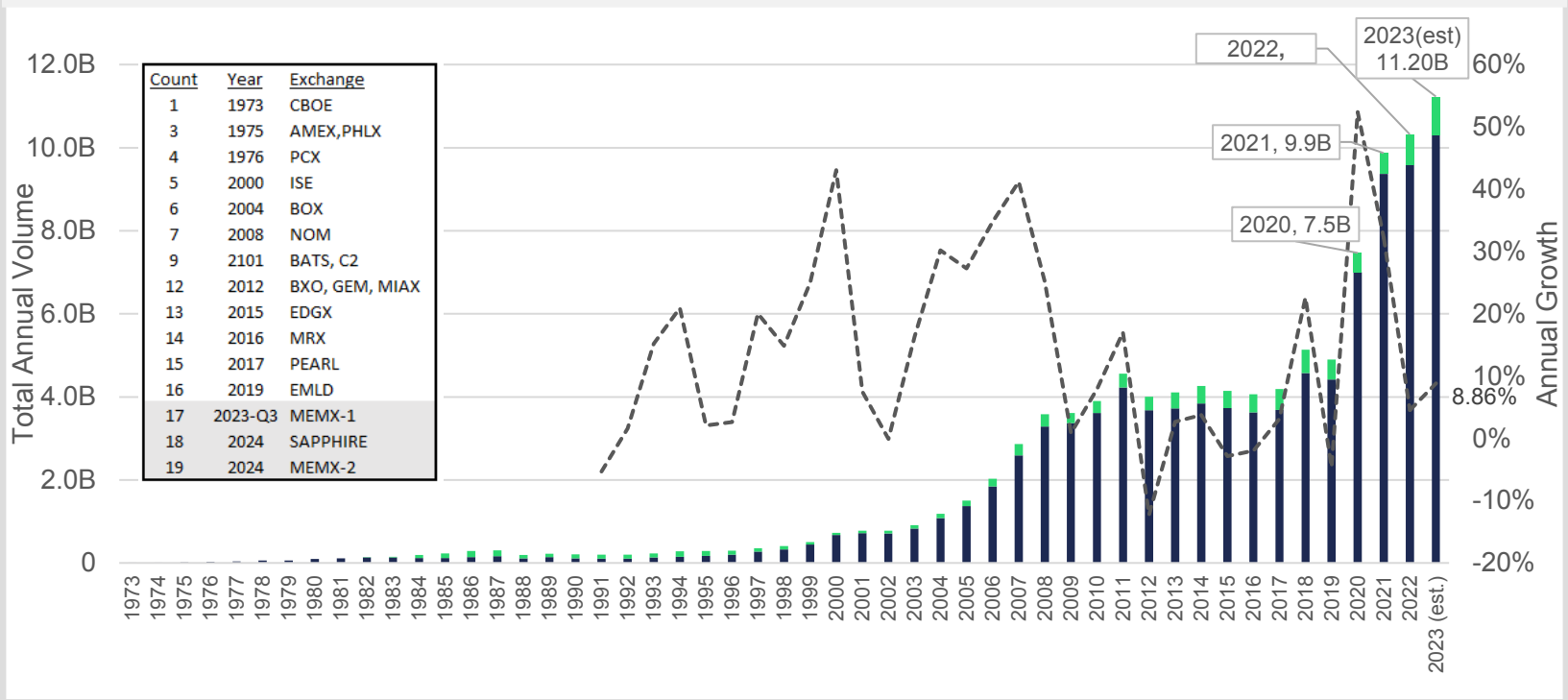
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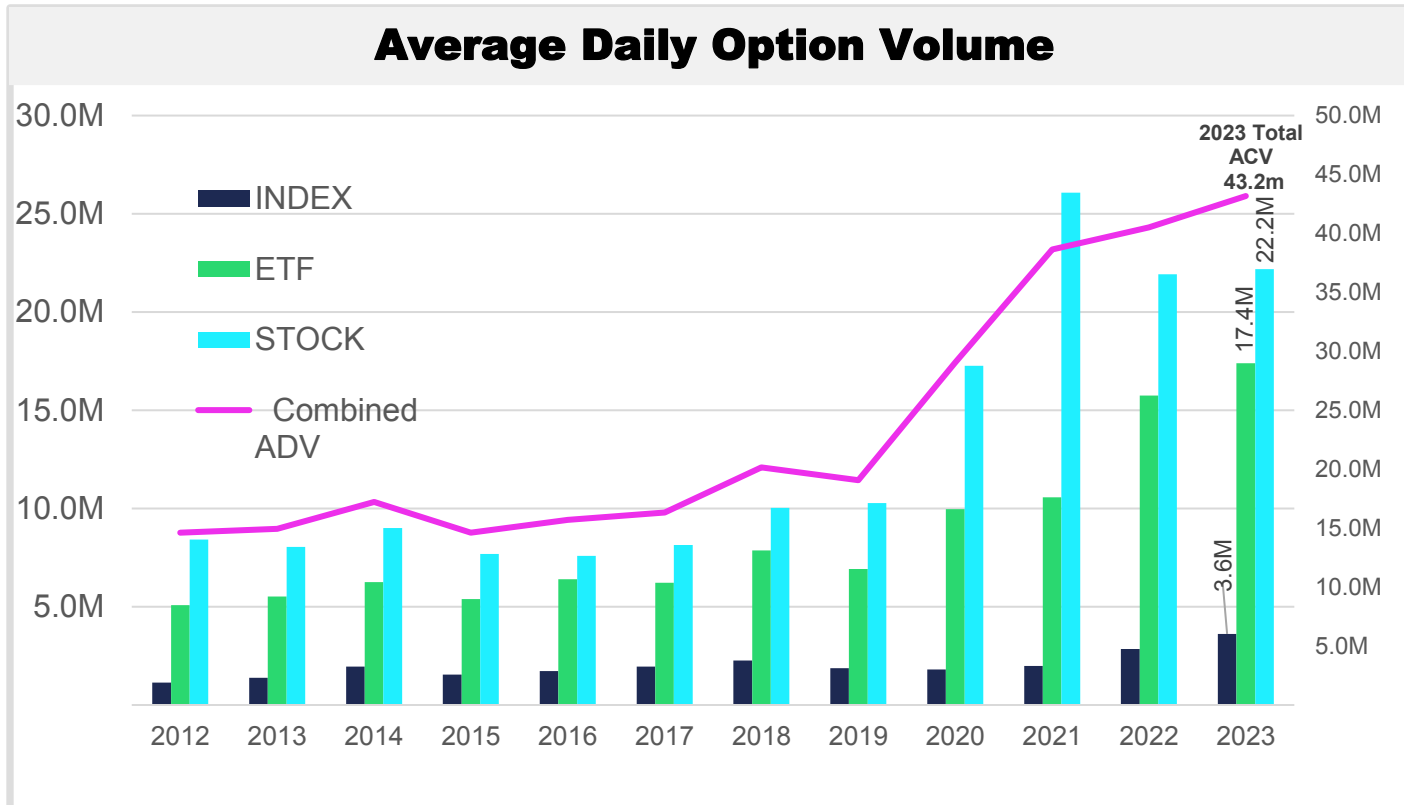
Volume

Market-wide Annual Option Volume



7/31/23 Options Clearing Corp and Cboe LiveVol, LLC

Volume - Product Type

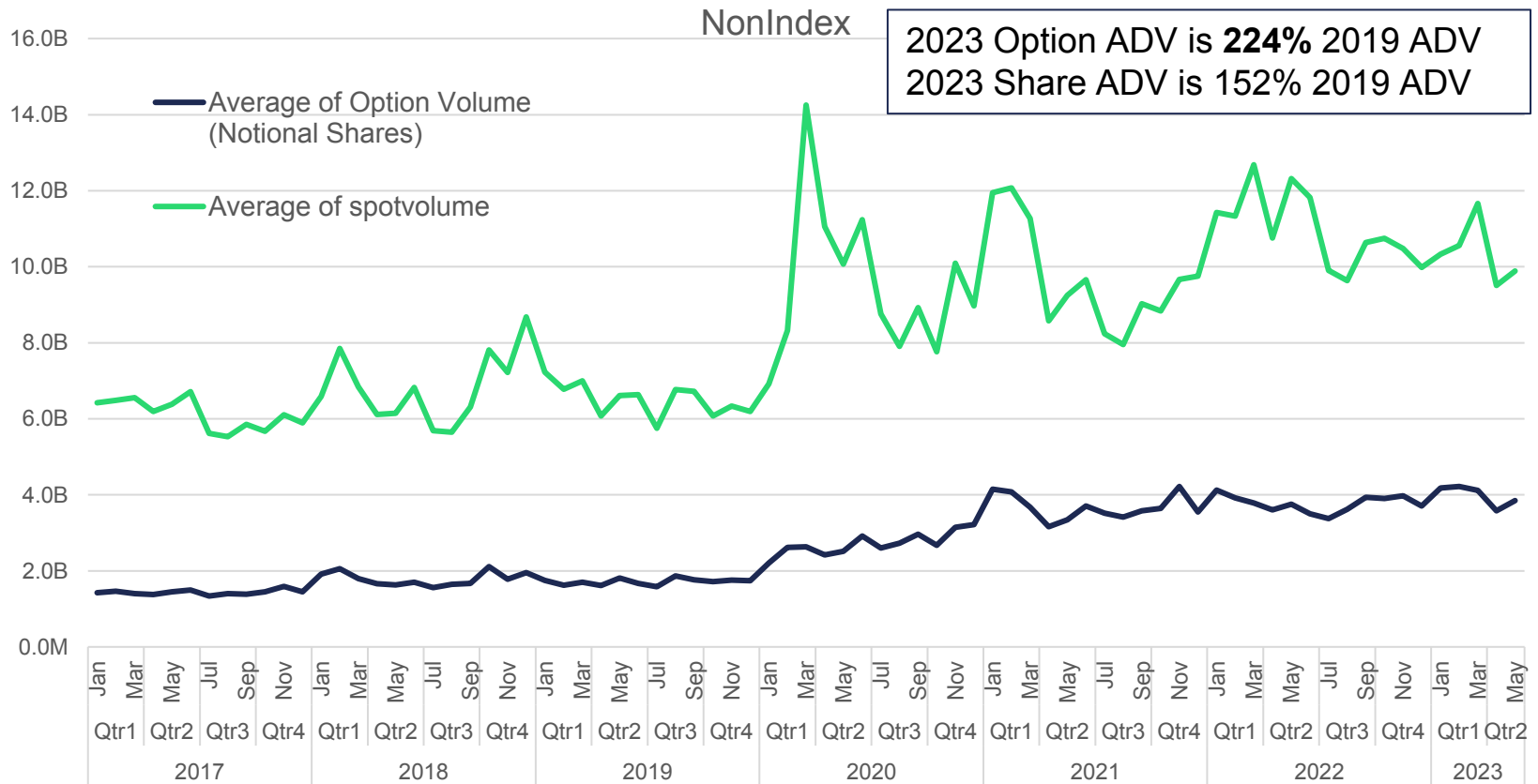


| Annualized Growth | |
|------------------------------|-----|
| 2023 YTD vs Prior Full Years | |
| Index | |
| 1yr | 27% |
| 5yr | 14% |
| 10yr | 10% |
| ETF | |
| 1yr | 12% |
| 5yr | 21% |
| 10yr | 12% |
| Stock | |
| 1yr | 2% |
| 5yr | 17% |
| 10yr | 11% |
| Total | |
| 1yr | 8% |
| 5yr | 15% |
| 10yr | 11% |

7/31/23 Options Clearing Corp and Cboe LiveVol, LLC

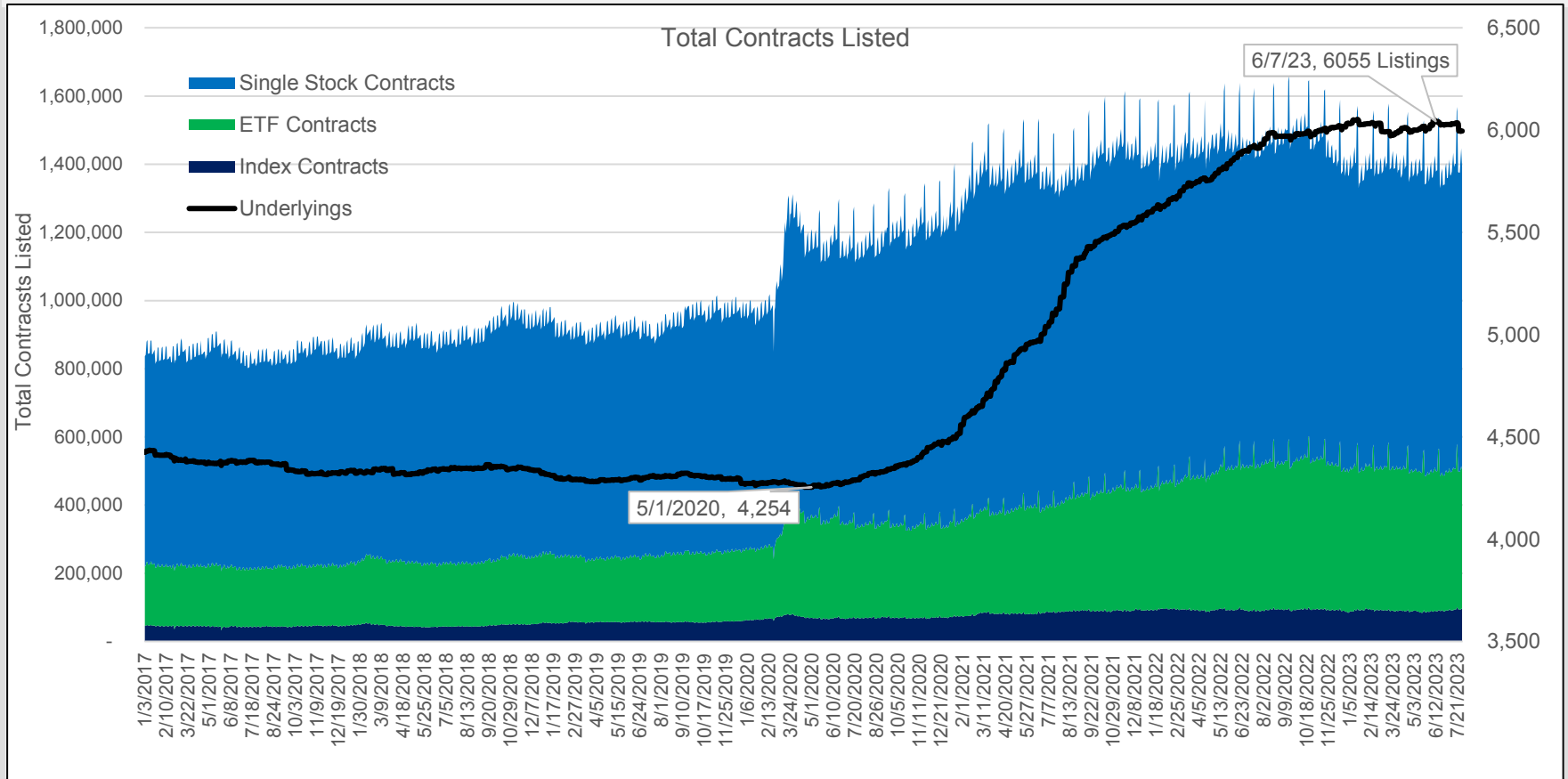
Volume - Product Type

Average Daily Option Volume – Options vs Spot



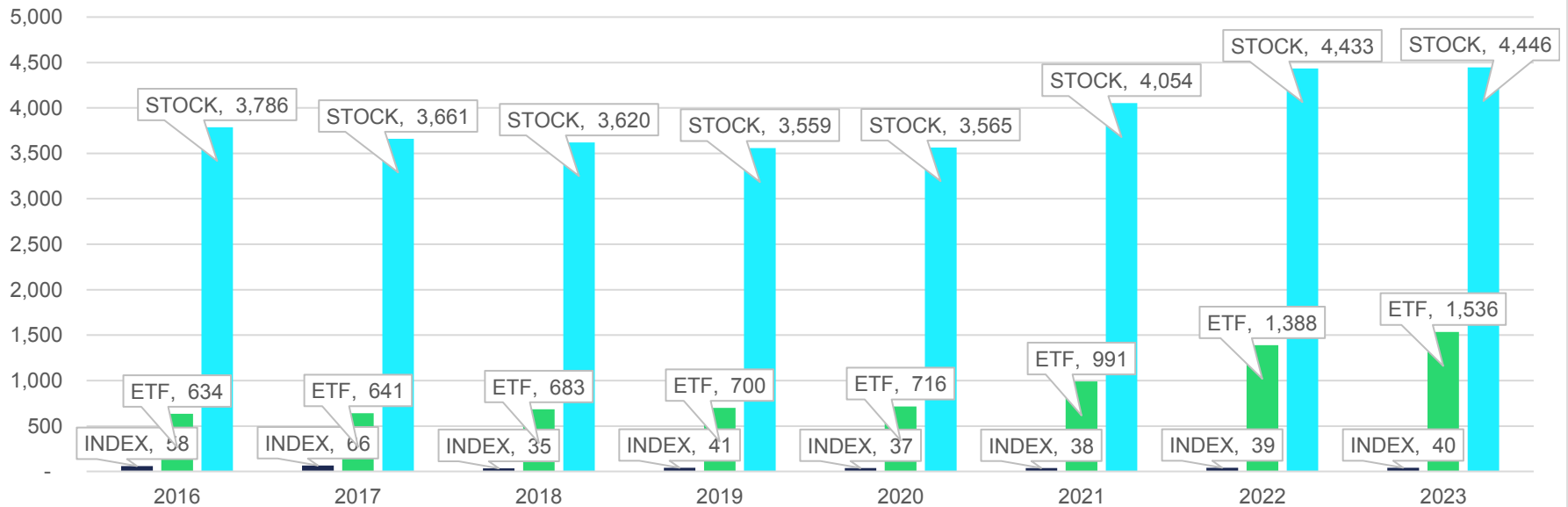
Listings

Contract Proliferation



Listings

Listed Options by Underlying Type



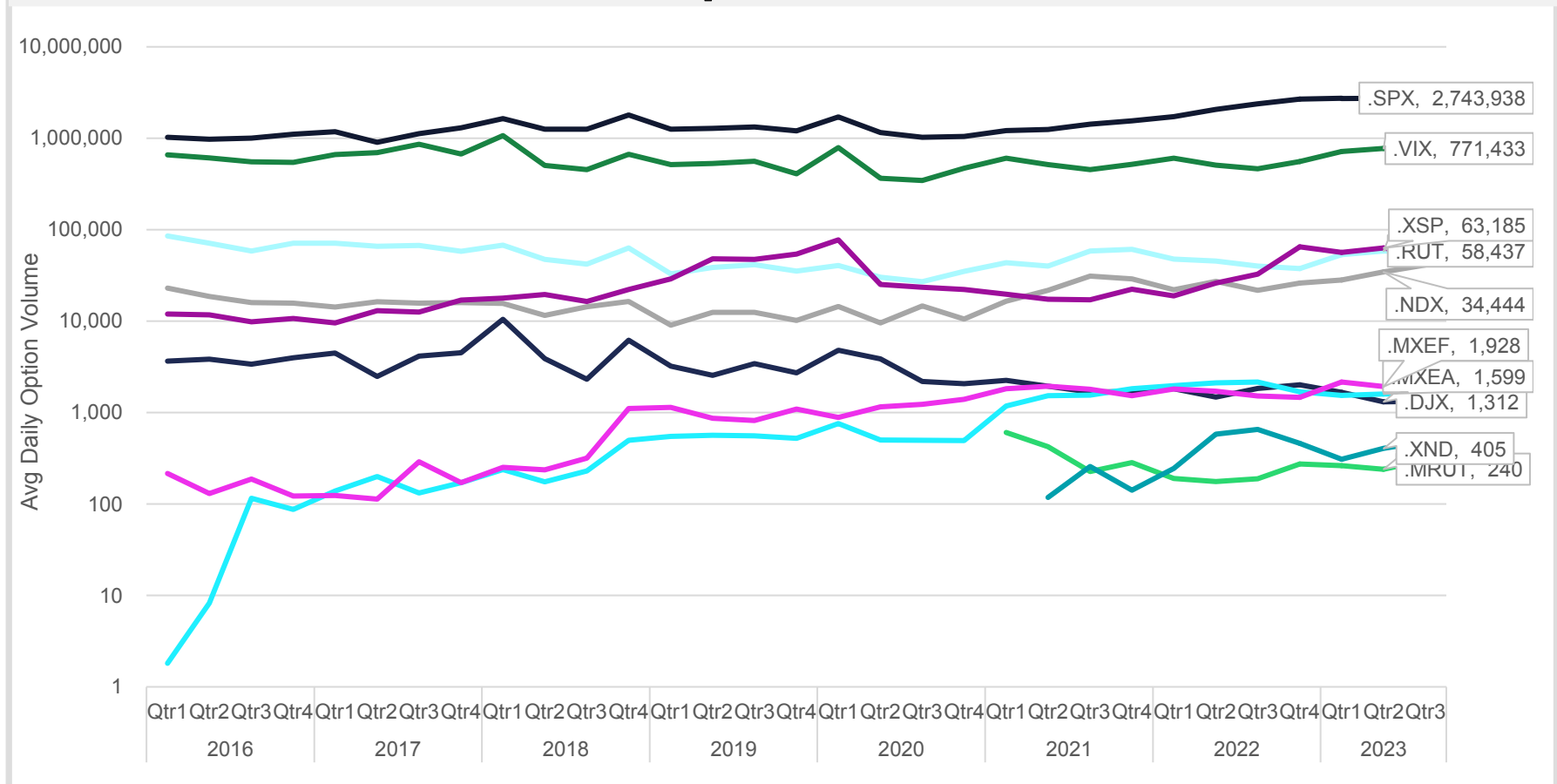
1700 new listings since 2020 (+39%)

882 new stocks (+25%)

821 new ETFs (+115%)

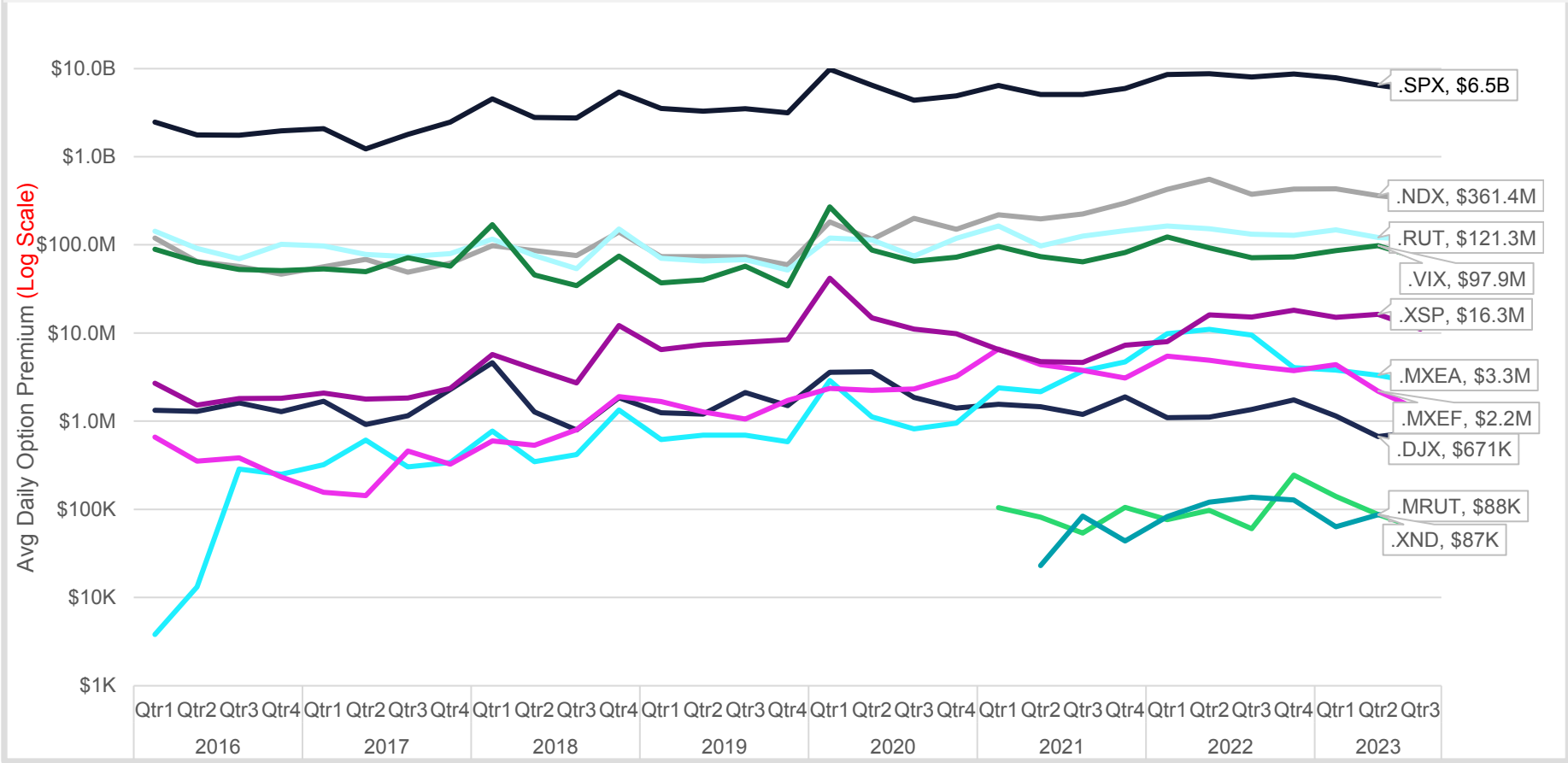
Volume - Index

Average Daily Option Volume 2023 Top Index Products



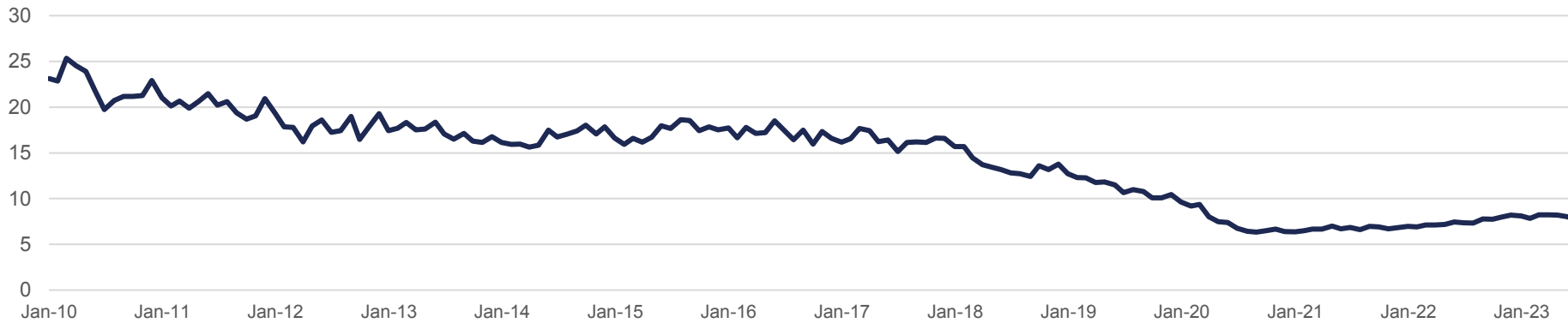
Premium - Index

Average Daily Option Premium 2023 Top Index Products

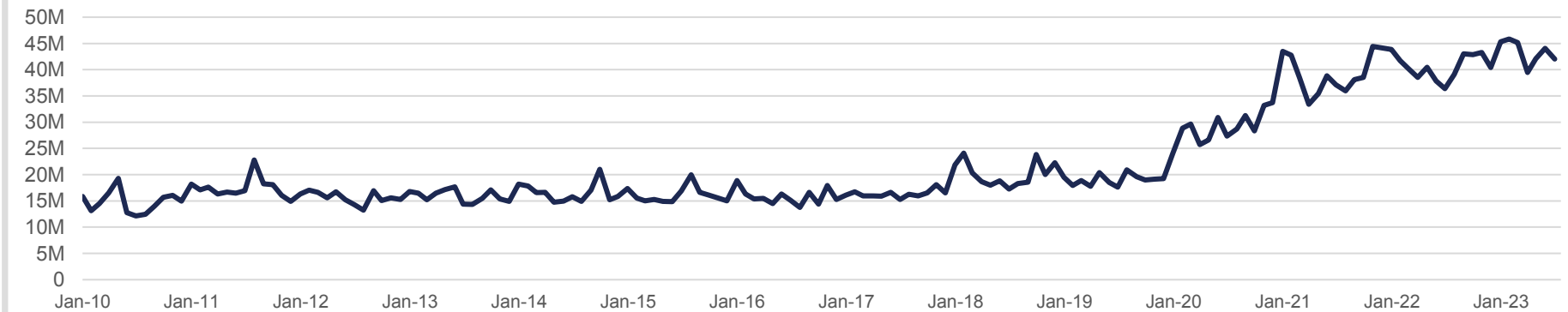


Trade Size

Average Execution Size

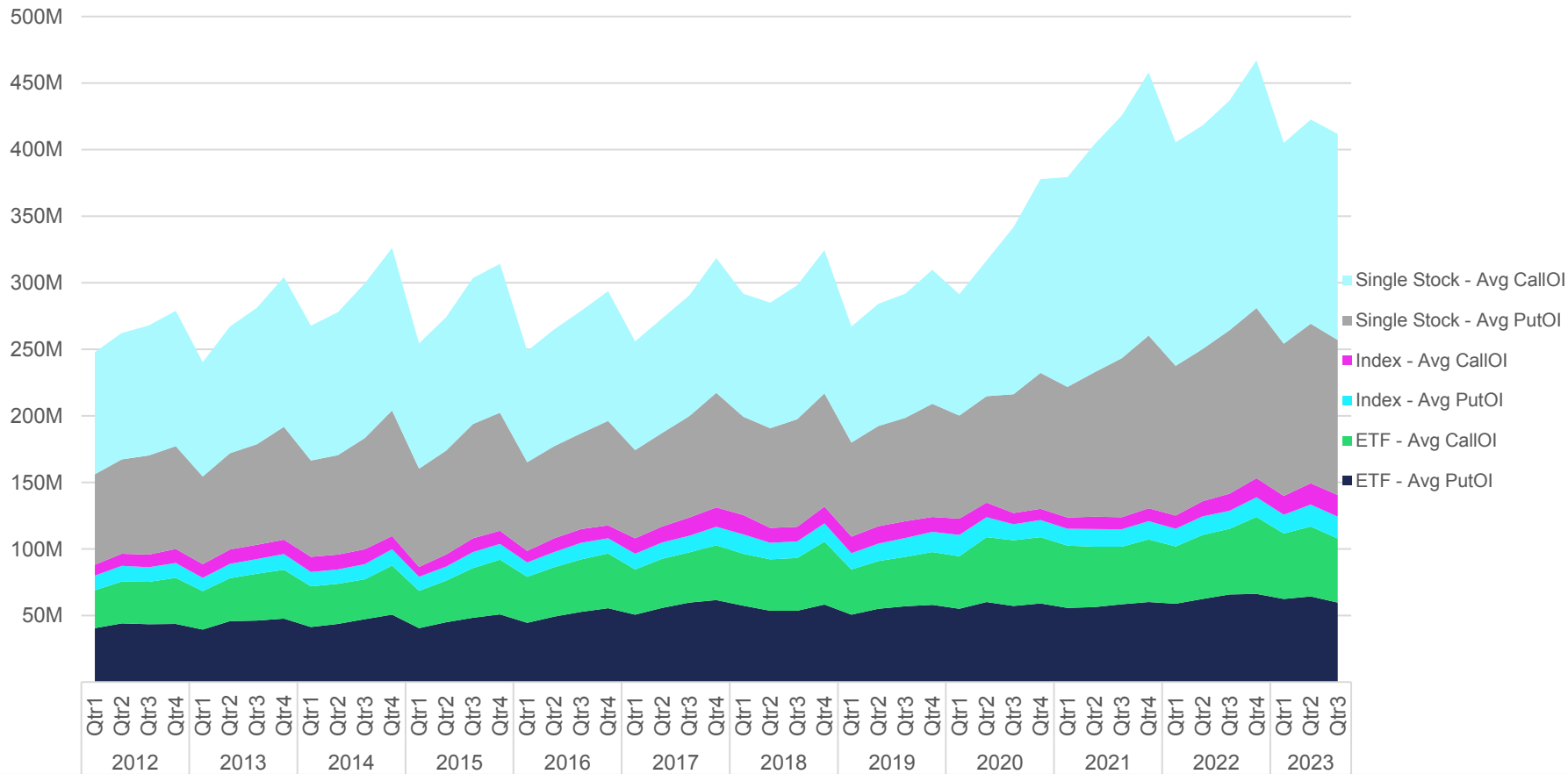


Option ADV



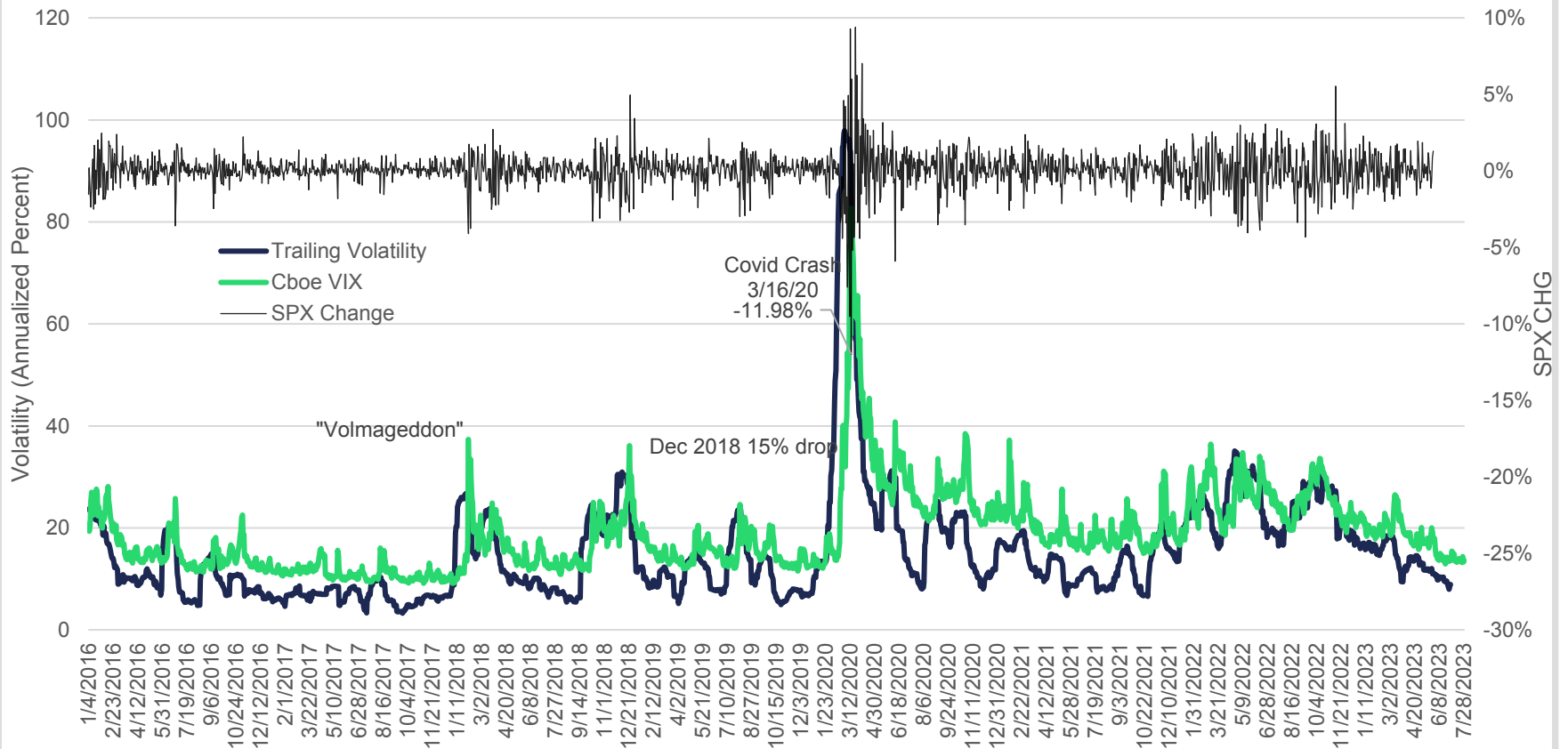
Volume - Open Interest

Average Daily Total Open Interest

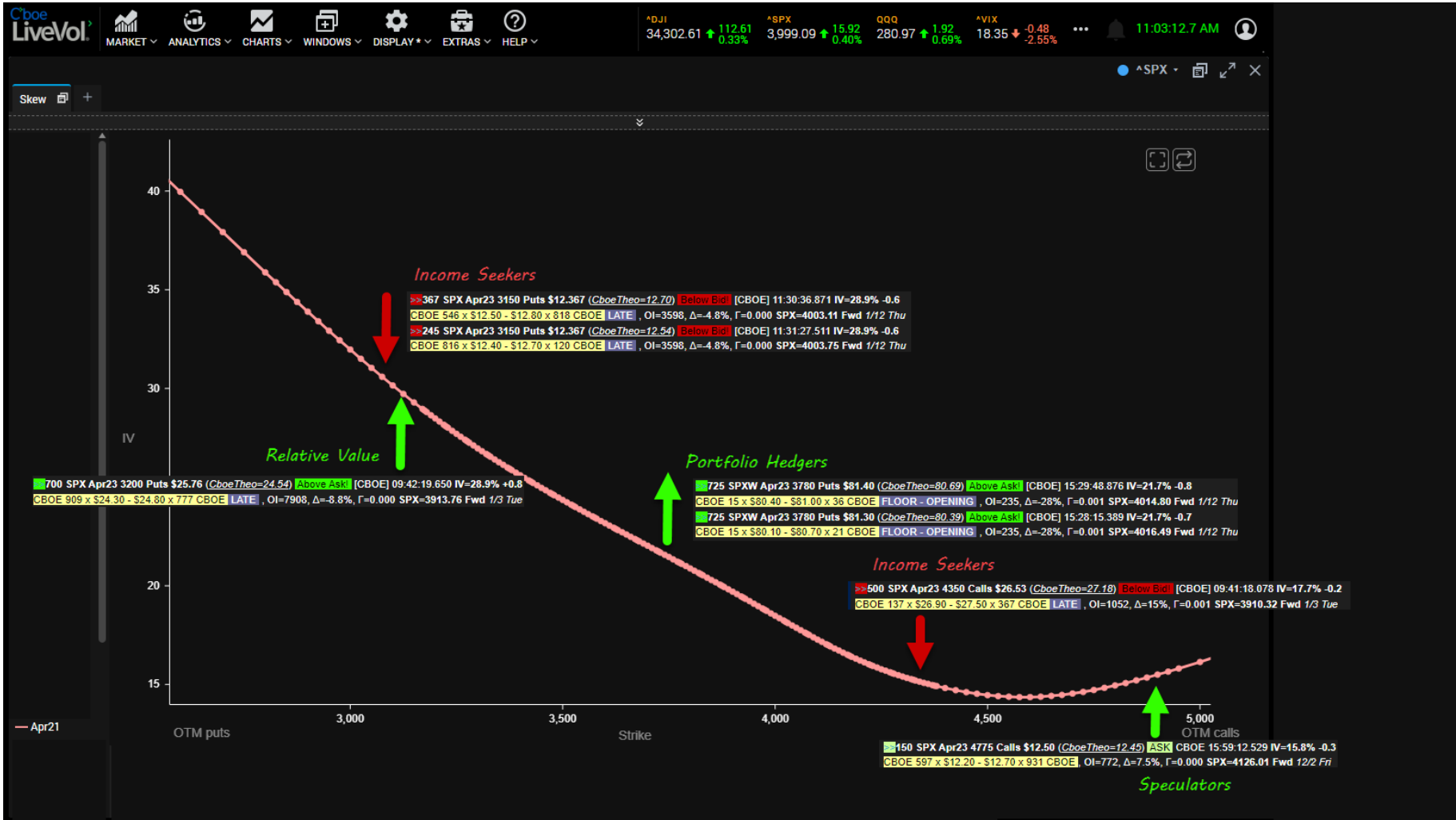


Volatility

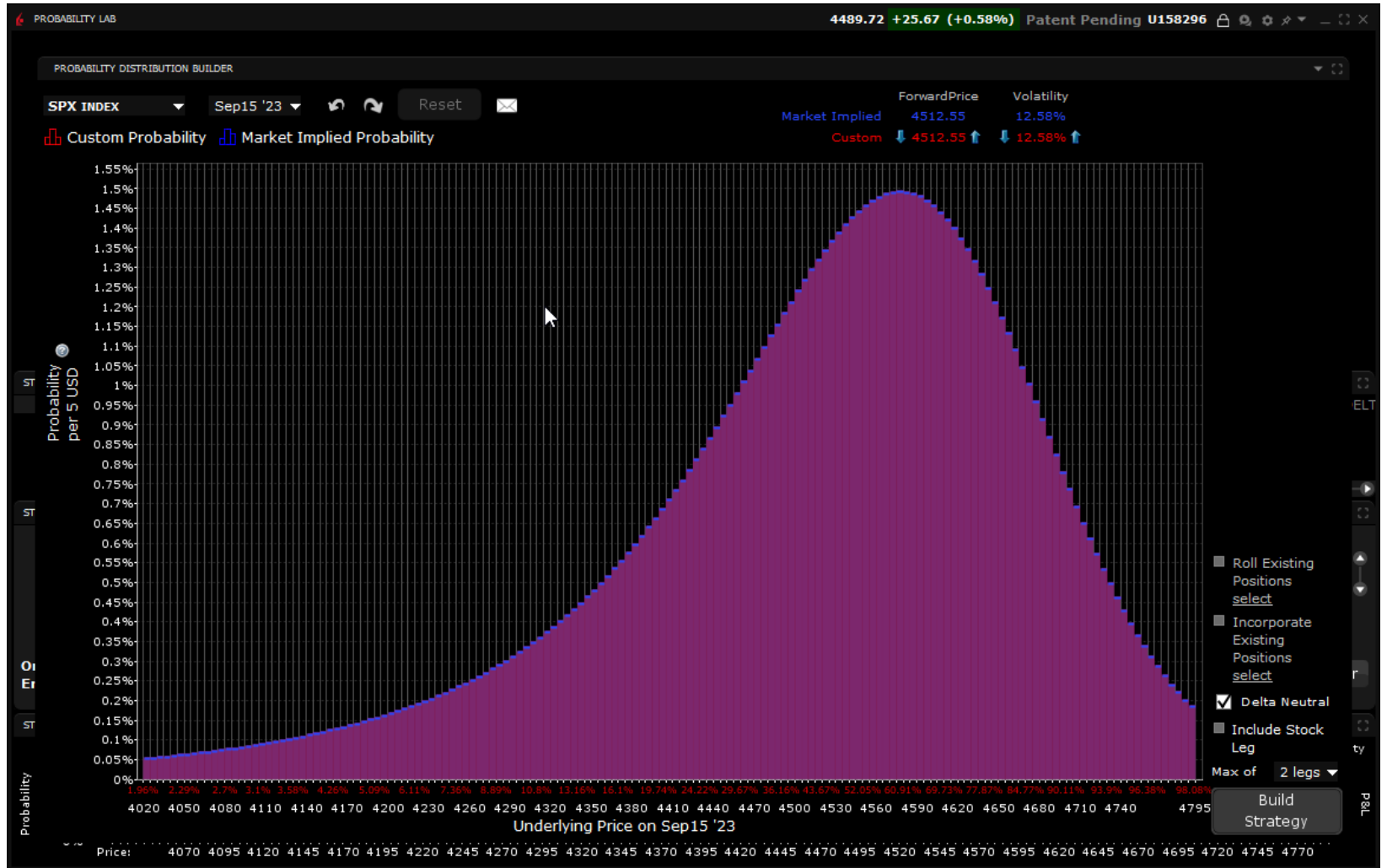
Implied vs Realized Volatility VIX vs SPX



Volatility – Supply and Demand

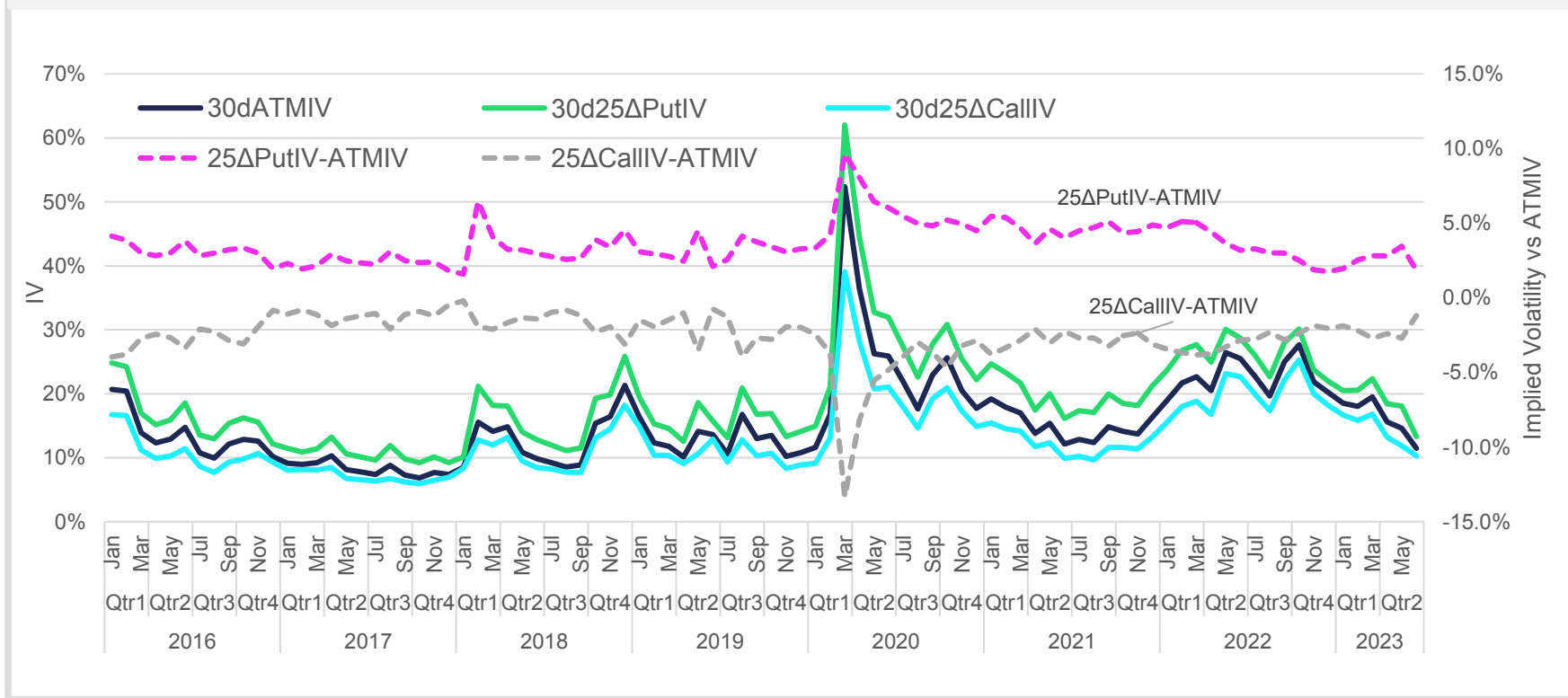


Volatility – Supply and Demand



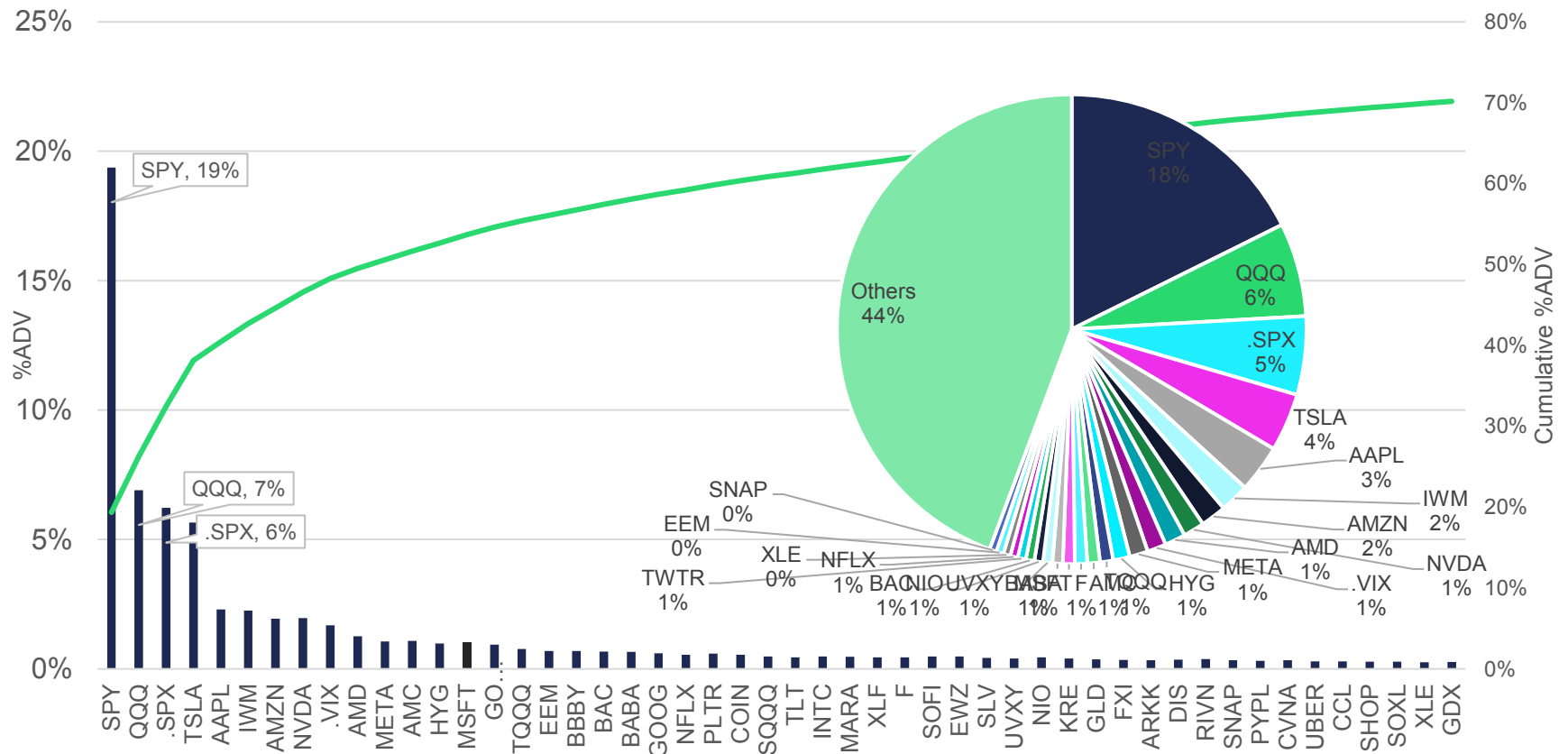
Volatility – SPX Skew

SPX 30d Implied Volatility and Put-Call Skew



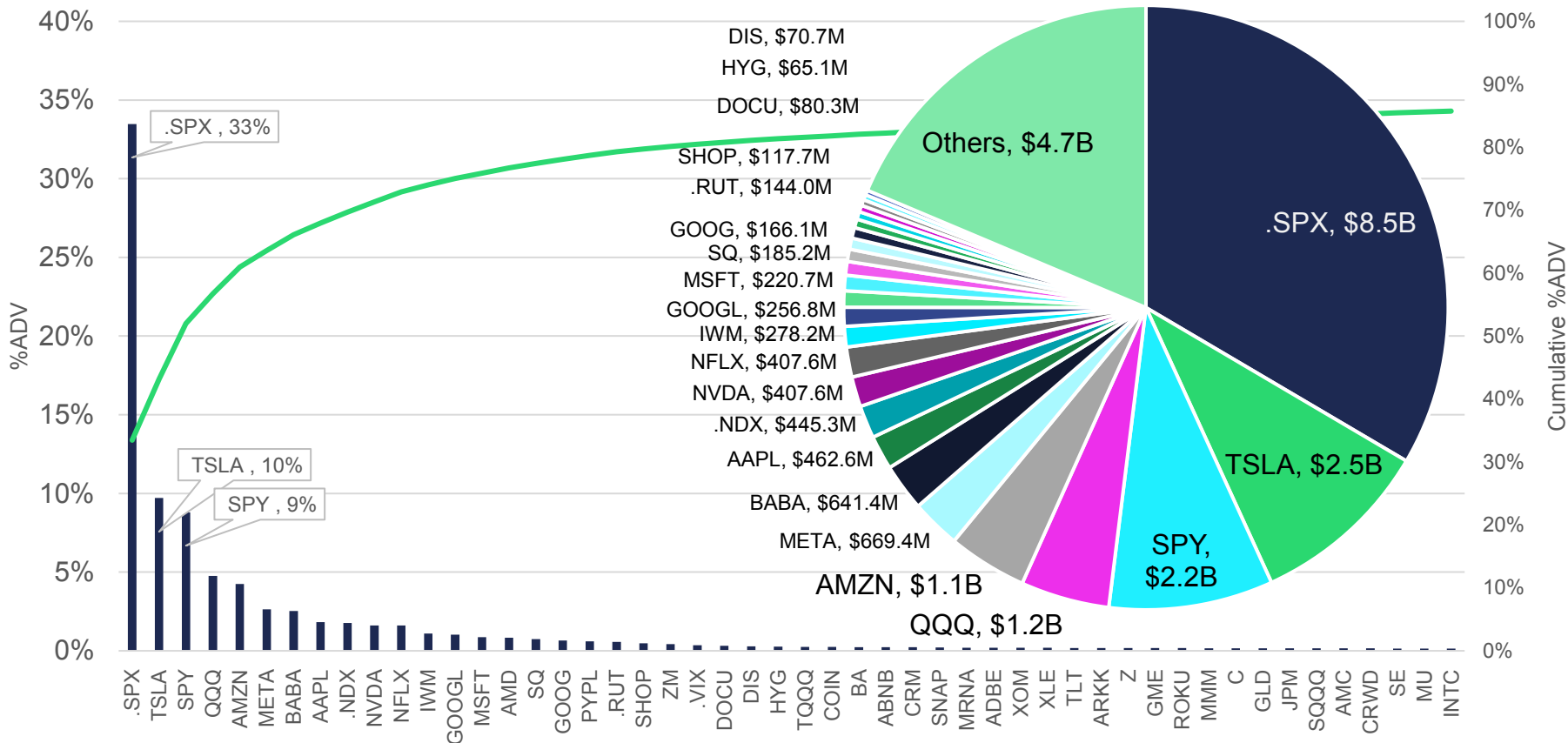
Concentration

2022 Product Volume Concentration



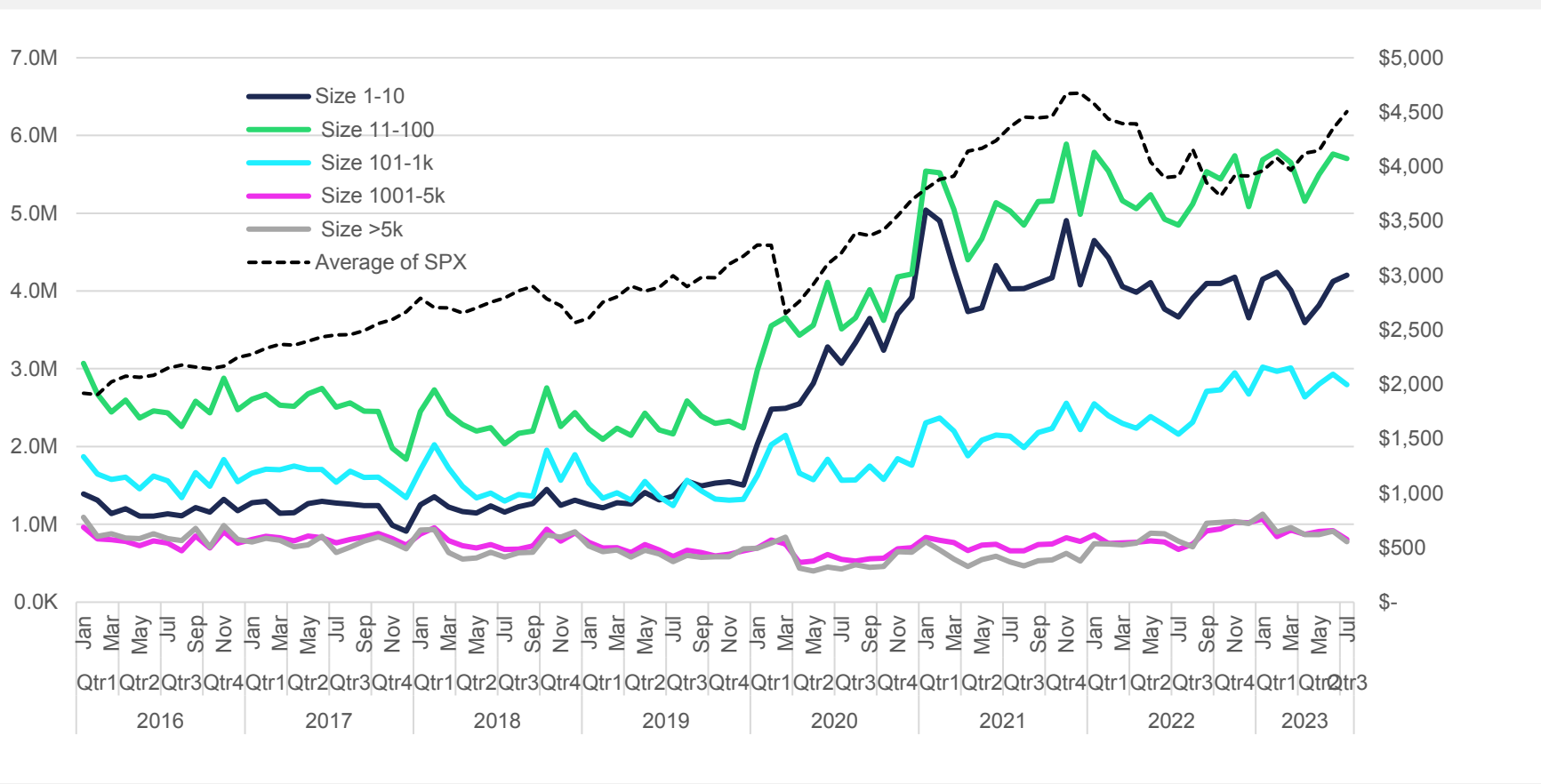
Liquidity - Concentration

Product Premium Concentration



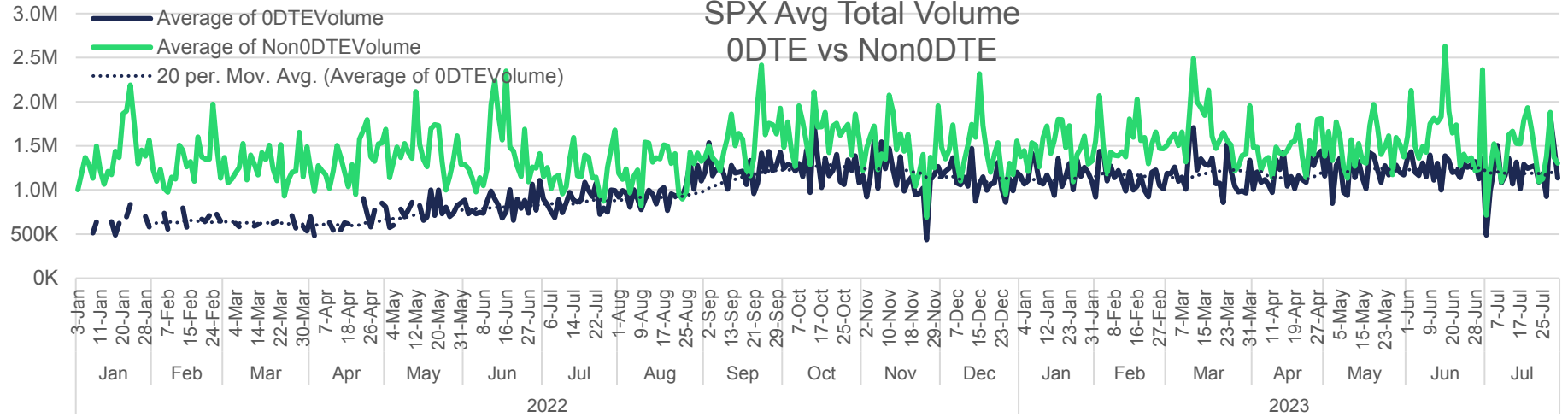
Volume – Execution Size

Average Daily Option Volume by Size

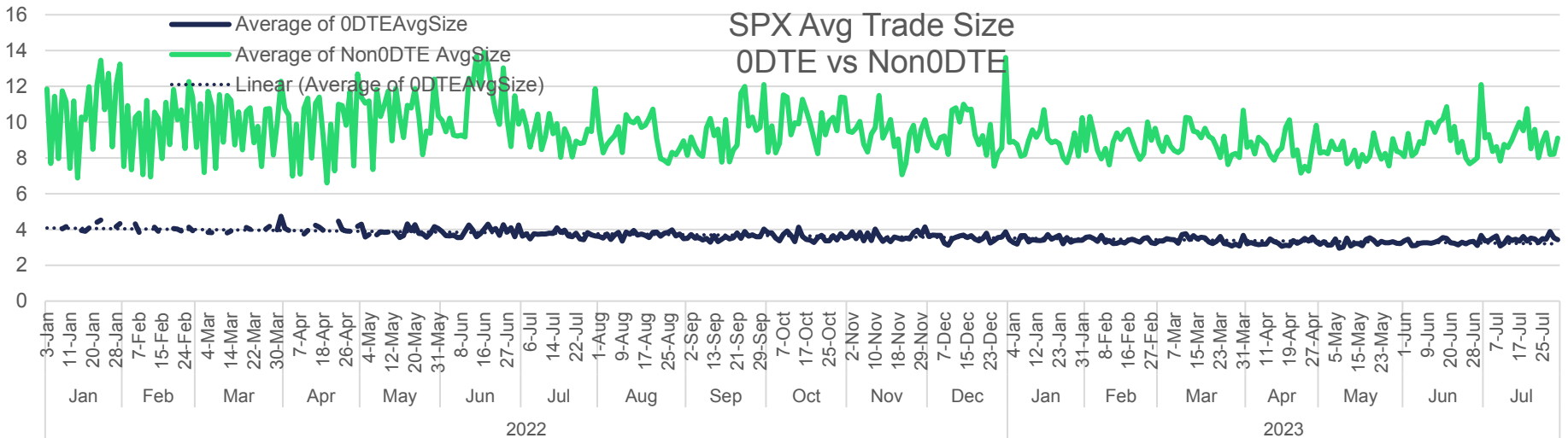


Volume - 0 DTE Options Flow

SPX Avg Total Volume 0DTE vs Non0DTE



SPX Avg Trade Size 0DTE vs Non0DTE



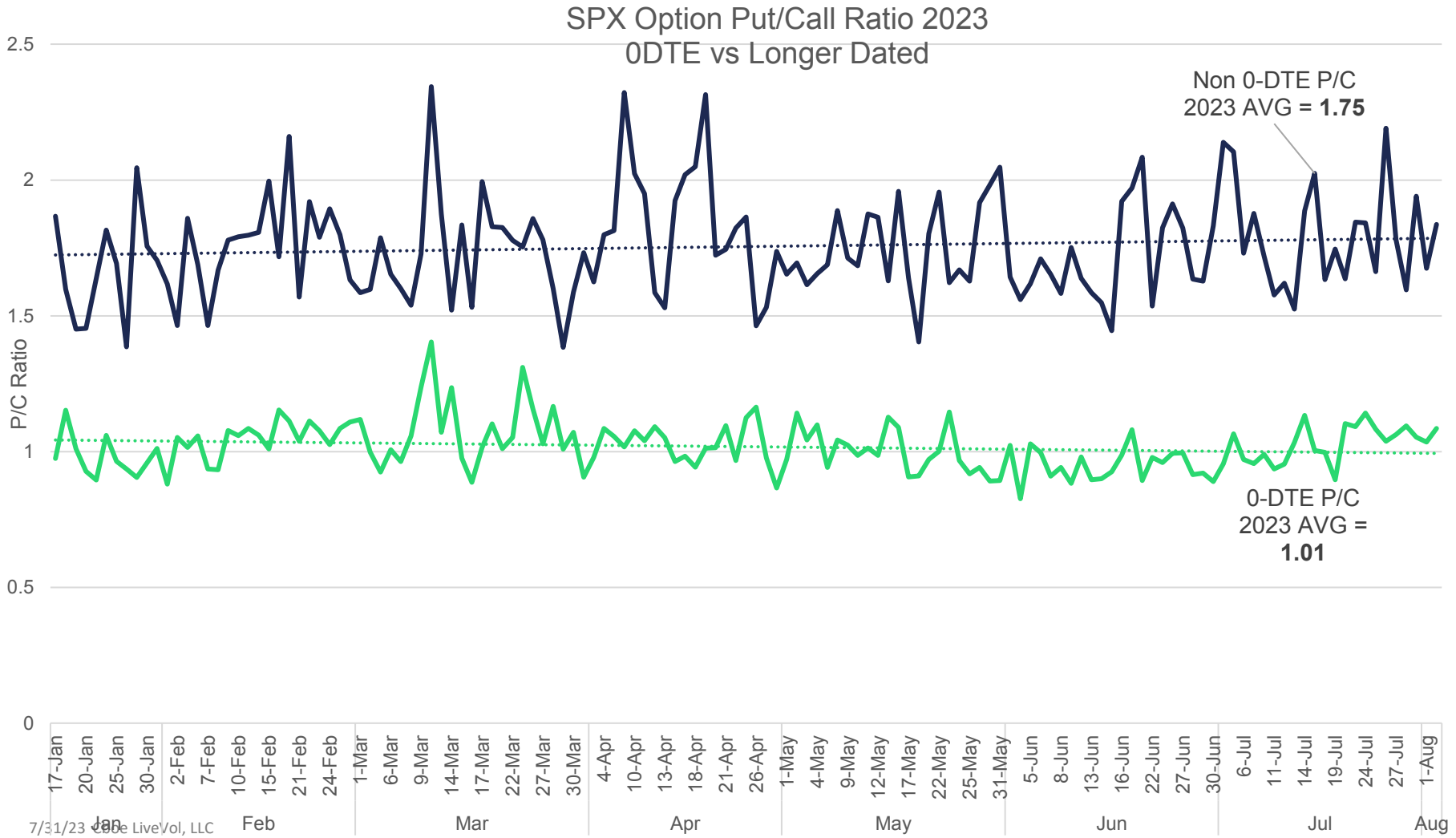
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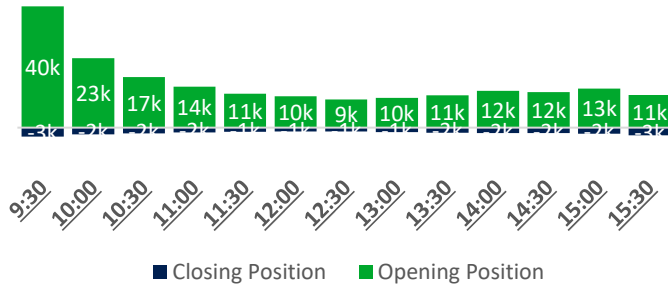


Volume - 0 DTE Options Flow

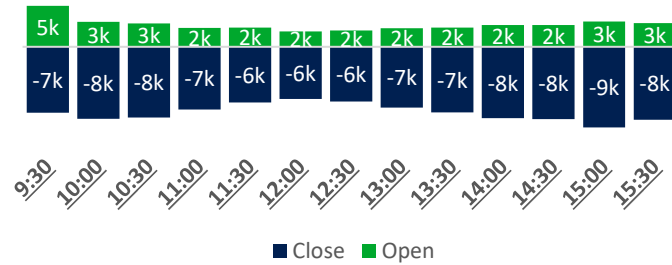


SPX 0 DTE – Hourly Trends

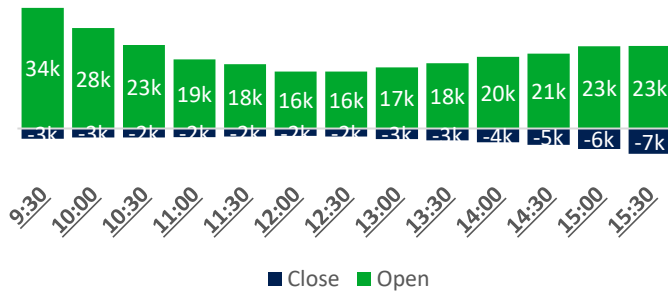
Vertical Spreads - Net Sold



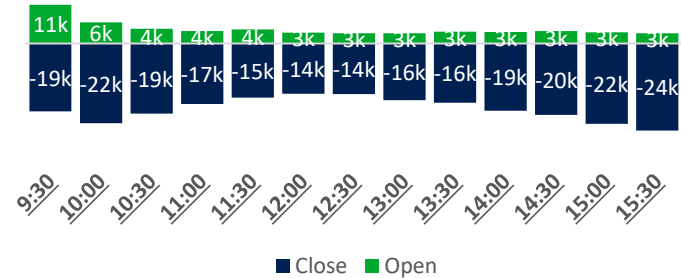
Vertical Spreads - Net Bought



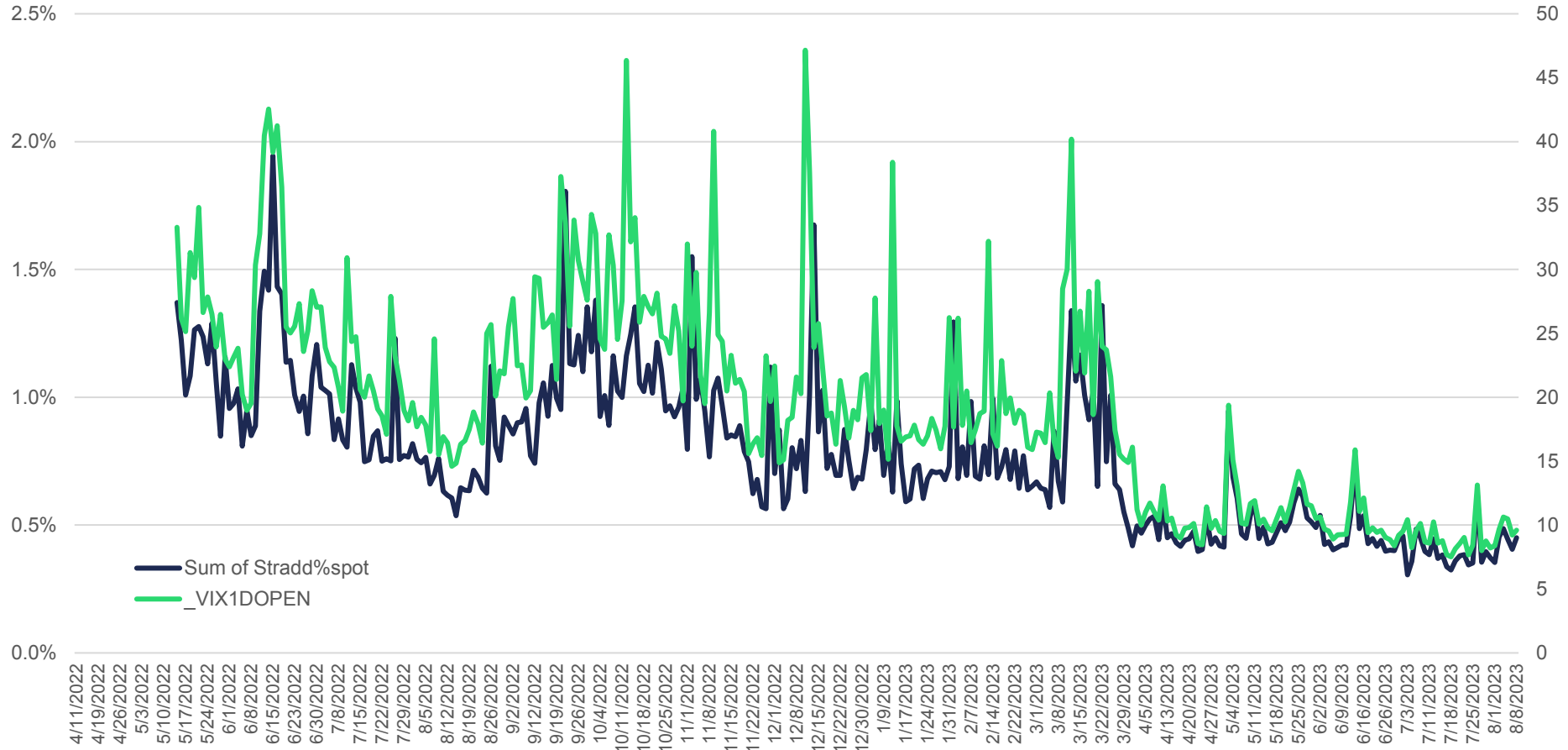
Single Legs - Net Bought



Single Legs - Net Sold



Pricing - 0 DTE Options



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PART 2: TRADES

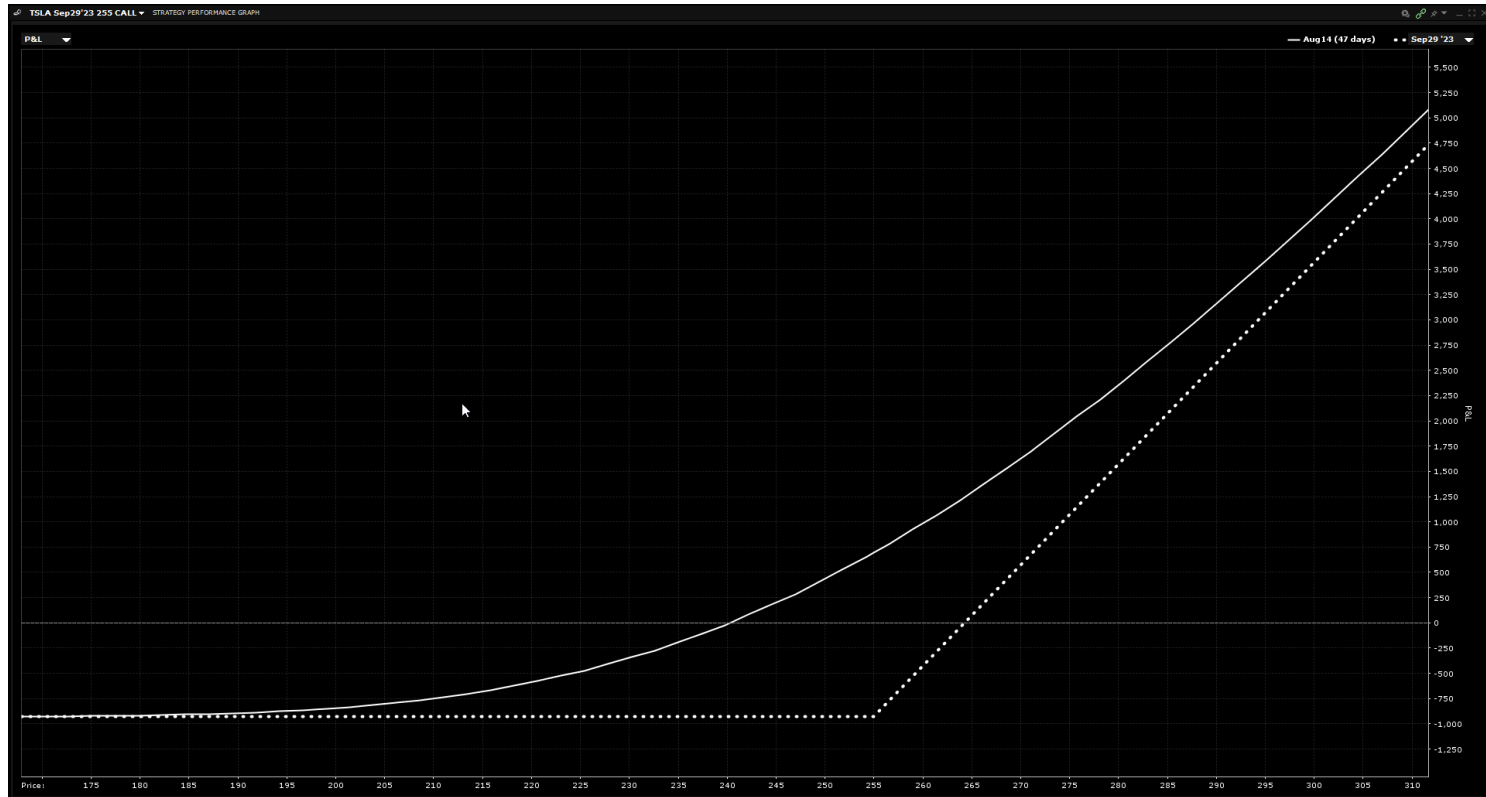
Example - Directional Outright

Top Trades and Sweeps (/top @STOCK)

@STOCK, Benchmark .SPX +0.6%

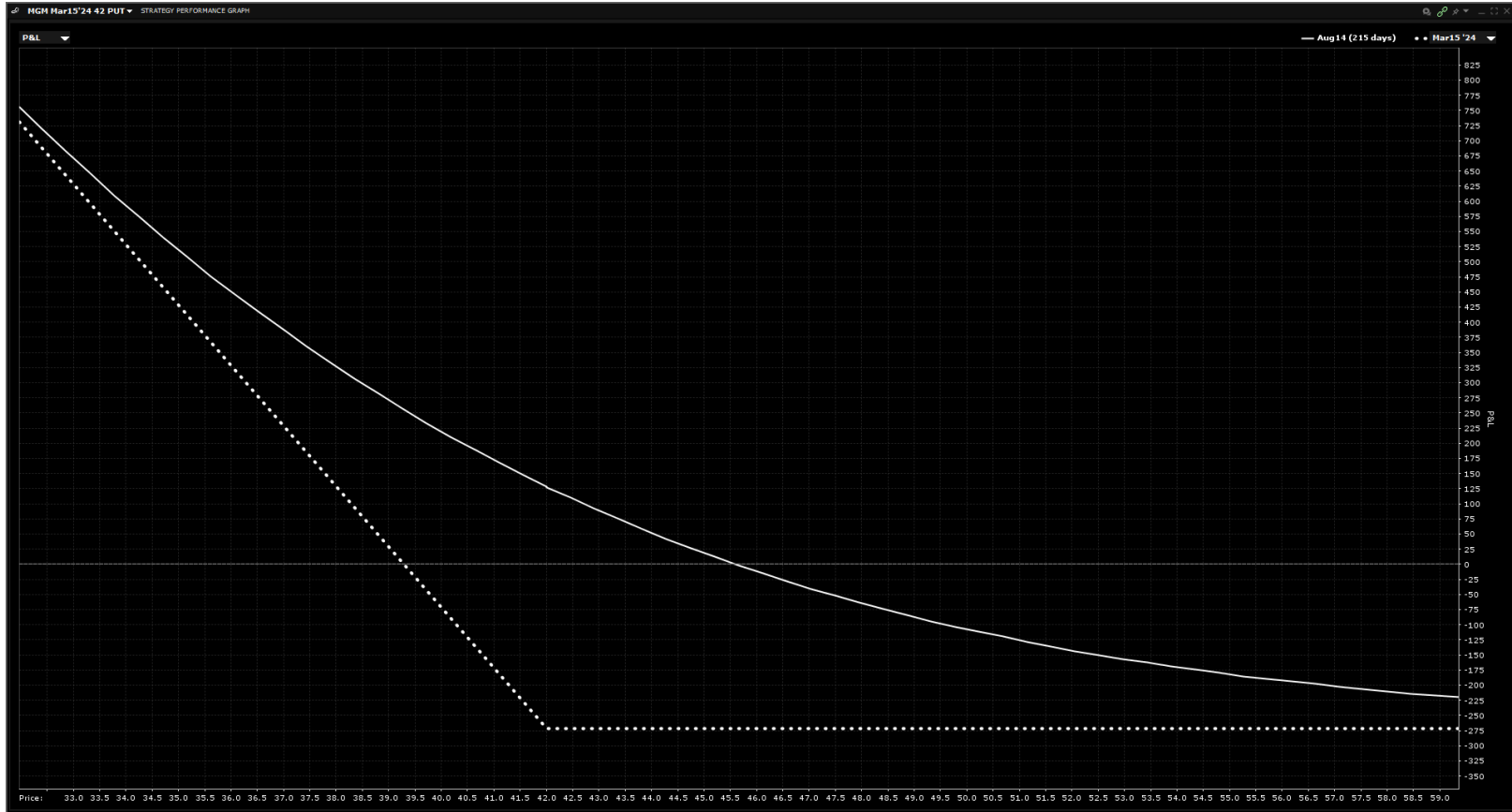
86 TSLA Sep23 29th 255 Calls \$7.95 (CboeTheo=7.87) ASK [CBOE] 09:36:12.847 IV=44.6% +1.3

EDGX 375 x \$7.65 - \$7.95 x 150 CBOE OPENING, OI=78, $\Delta=35\%$, $\Gamma=0.010$ TSLA=234.84 Ref [Detail](#)



Example - Directional Outright

>>100 MGM Mar24 42.0 Puts \$2.72 (CboeTheo=2.74) BID C2 13:29:04.894 IV=35.6% -0.4
 NOM 8 x \$2.71 - \$2.78 x 69 PHLX OPENING , OI=6, Δ=-30%, Γ=0.029 MGM=45.41 Ref [Detail](#)



Directional Spreads

SPY trades at 14:15:47.414
SPY 447.95 +2.31 (+0.52%)

TRADE 2813 SPY Aug23 25th 455 Calls

BXO 1340 x \$1.17 - \$1.18 x 7012 EDGX **ASKSIDE** **SPREAD/LEGGED**

Volume=12k, Open Interest=7692

Impact=62k shares (\$27.9m)

IVol=12.1% +0.8, Vega\$=\$66k, Theta\$=-\$35k

2813 contracts traded at \$1.18 on the ISE at 14:15:47.414

TRADE 2813 SPY Aug23 25th 460 Calls

EDGX 7131 x \$0.35 - \$0.36 x 2135 BXO **BIDSIDE** **SPREAD/LEGGED**

Volume=14k, Open Interest=14k

Impact=25k shares (\$11.0m)

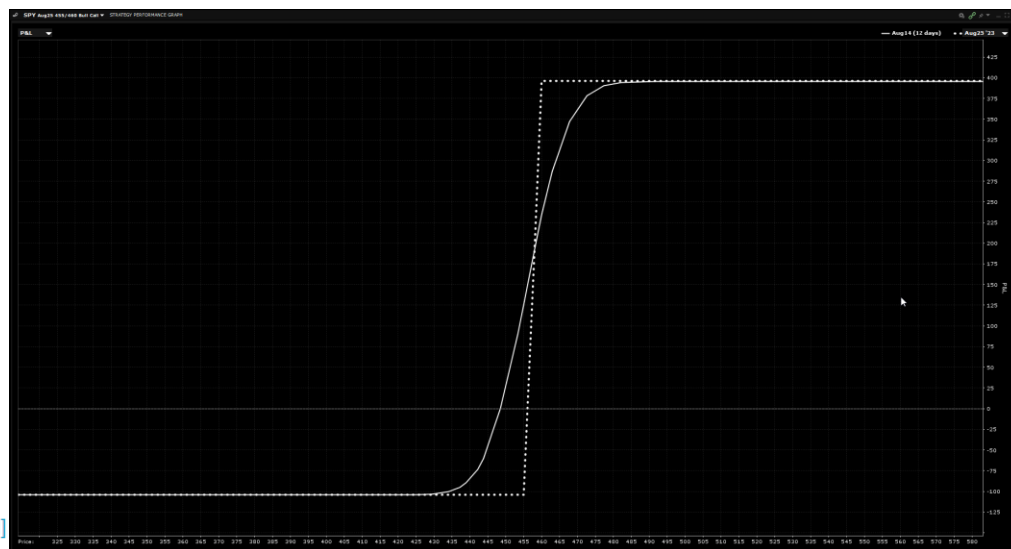
IVol=11.5% +0.7, Vega\$=\$37k, Theta\$=-\$16k

2813 contracts traded at \$0.35 on the ISE at 14:15:47.414

> 2813 SPY Aug23 25th 455/460 Call Spread \$0.83 (CboeTheo=\$0.83) ASK ISE
14:15:47.414 **SPY=446.63** [Detail](#)

= 2813 Aug23 25th 455 Calls bought at \$1.18 14:15:47.414 (CboeTheo=\$1.18)

= 2813 Aug23 25th 460 Calls sold at \$0.35 14:15:47.414 (CboeTheo=\$0.35) [\[download\]](#)



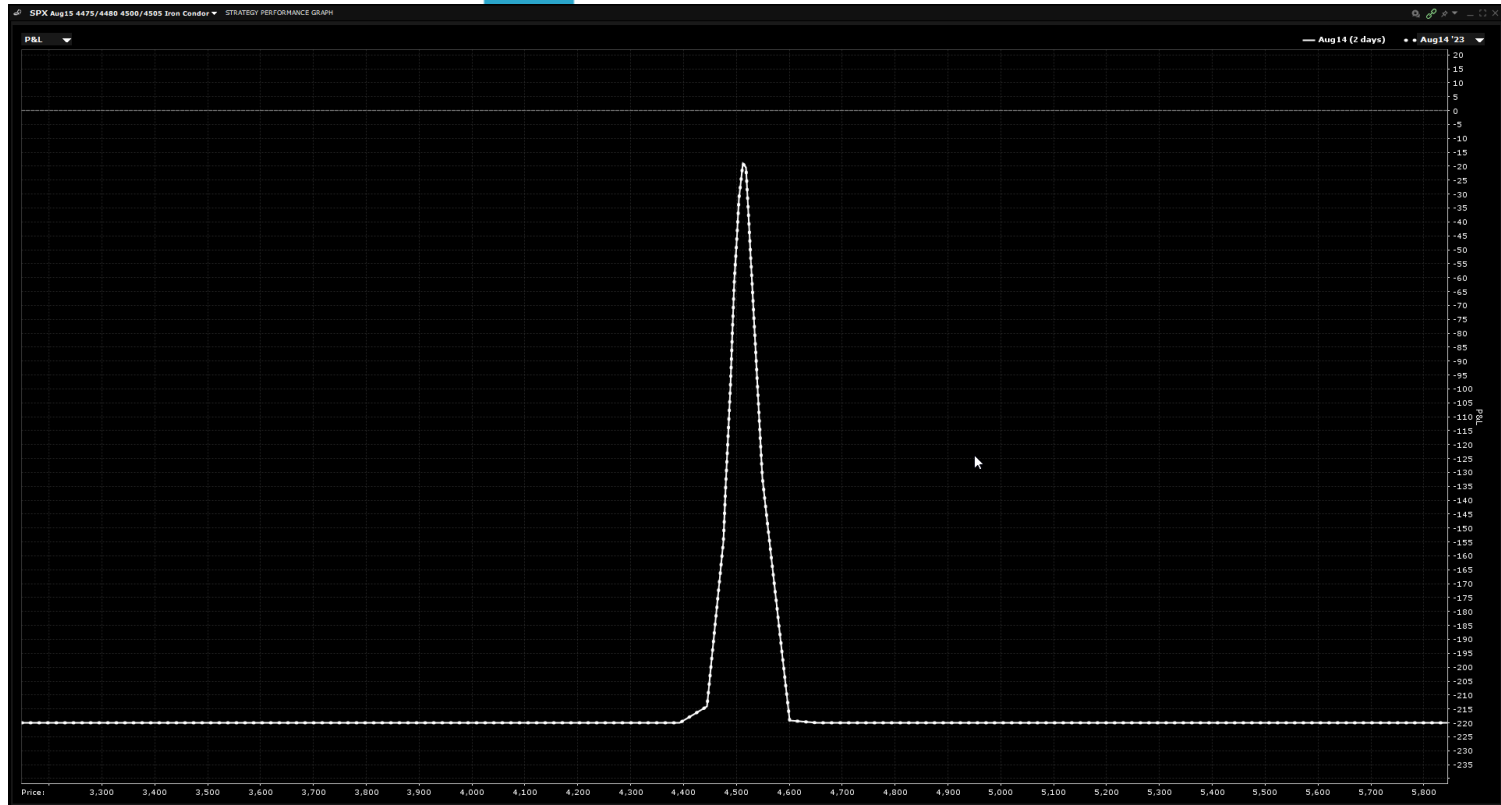
NonDirectional Spreads

Top IronCondor Spreads (/ironcondor .SPX)

.SPX 4489.72 +25.67 (+0.58%)

100 SPX Aug23 14th 4435/4440/4475/4480 Iron Condor \$2.10 (CboeTheo=\$2.29) **BID** CBOE

09:32:32.999 SPX=4453.89 Fwd [Detail](#)



Paying Attention to Order Flow

Top Trades and Sweeps (/top SFL)

SFL 10.53 +0.54 (+5.36%) @ENER1

1657 SFL Sep23 10.0 Calls \$0.70 (CboeTheo=0.67) ASK [MULTI] 15:25:35.584 IV=40.0% +18.6

ARCA 17 x \$0.60 - \$0.70 x 349 PHLX ISO - OPENING , OI=241, Δ=67%, Γ=0.310 SFL=10.41 Ref [Detail](#)

500 SFL Sep23 10.0 Calls \$0.60 (CboeTheo=0.56) ASK [MULTI] 15:23:22.098 IV=30.4% +8.9

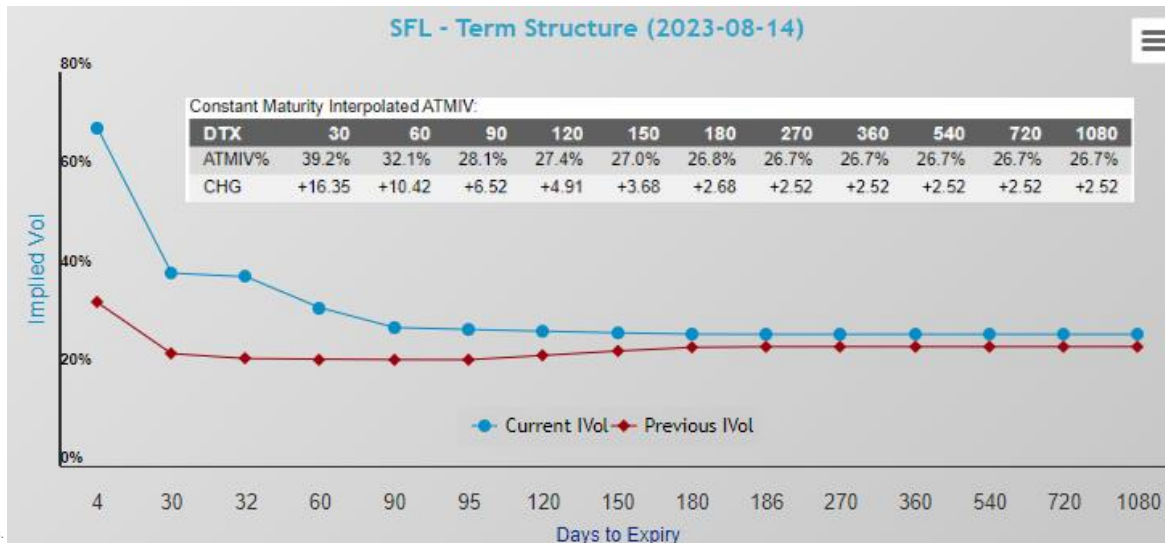
BXO 13 x \$0.50 - \$0.60 x 55 BOX ISO - OPENING , OI=241, Δ=70%, Γ=0.389 SFL=10.41 Ref [Detail](#)

Option Volume Breakdown (/volume SFL)

SFL 10.53 +0.54 (+5.36%) @ENER1

| | Volume | Expected | %Normal | Trades | ADV | Projected |
|-------|--------|----------|---------|--------|------|-----------|
| Calls | 7388 | 125 | 59x | 439 | 125 | 7388 |
| Puts | 754 | 47 | 16x | 89 | 47 | 754 |
| Total | 8142 | 172 | 47x | 528 | 172 | 8142 |
| Spot | 2.06m | 694k | 2x | N/A | 694k | 2.06m |

47.3 times usual daily volume [\[download\]](#) [\[chart\]](#)



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