



# Market Structure Report

04-26-2024

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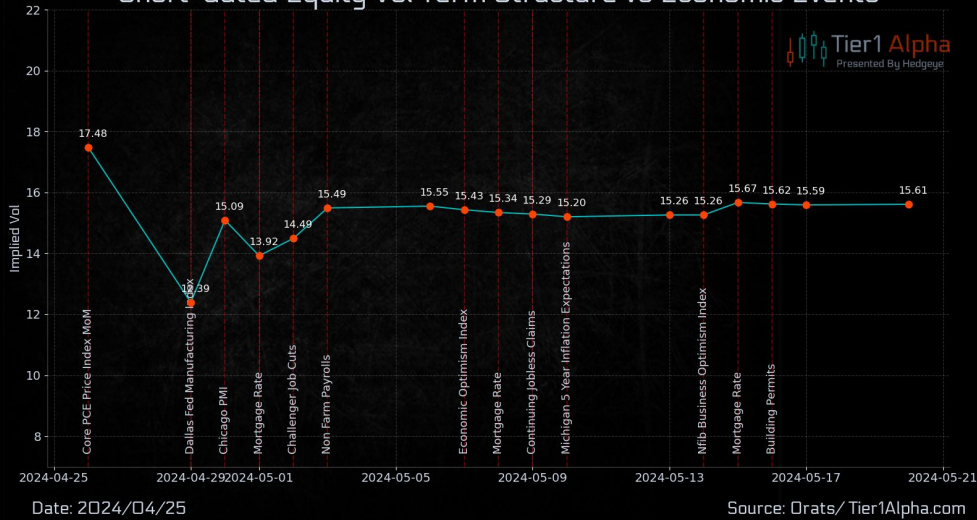
Data provided by: <https://intrinio.com/>

# Summary:

- Yesterday marked a 12-month high in our intraday volatility model. In case you missed it, the S&P 500 was down by 1.6% early in the trading session but managed to stage an impressive comeback, paring most of its losses to end the day.
- This recovery occurred despite Meta still being down a significant 10.56% by the close. However, at the end of the day, the broader index wasn't really that weak, and thanks to the strong performance of Nvidia and Tesla, most of the negative impact from Meta was offset.
- From a structural standpoint, we suspect Puts were being quickly monetized at the open, which forced market makers to buy back the SPX futures they had previously shorted as a hedge. This buying pressure from dealers unwinding their short futures positions then amplified the recovery, contributing to a 1.14% bounce off the lows.
- Dealers remain in negative gamma, which means we continue to trade within a higher volatility regime. Despite yesterday's intraday volatility, our trading range between the 5000 and 5100 strike held up well.
- For today, we expect these levels to continue to hold, especially as our Probable Volatility bands have started to flatten out. All else being equal, this suggests some broader consolidation is likely, albeit with some volatile moves in between.
- Despite the rise in intraday vol, **realized volatility** declined yesterday, which means Vol control funds had to buy around \$8B in equity exposure yesterday.
- CTA funds have also started to buy back small amounts of equity exposure, but not enough to significantly impact the market yet. At the least, the aggressive deleveraging we saw last week has now paused.
- The window of weakness for systematic funds is starting to close as we're expected a decline in realized volatility next week. However, until then, we're continuing to approach this as a high-risk setup.

<b>Volatility Regime:</b>	Low	Neutral	<b>High</b>
<b>Flow Risk:</b>	Bullish	Neutral	<b>Bearish</b>
<b>PV Band Risk/Reward:</b>	Long	<b>Neutral</b>	Short

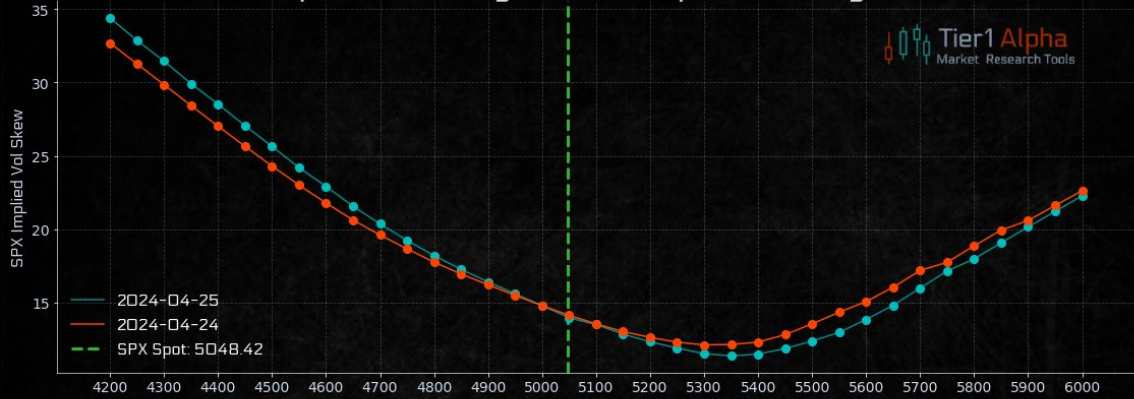
## Short-dated Equity Vol Term Structure vs Economic Events



## Economic Event Calendar

Date	Event	Estimate	Previous	Impact	SPX IV
2024-04-26	Core PCE Price Index MoM	0.3	0.3	high	17.48
2024-04-26	Personal Income	0.5	0.3	high	17.48
2024-04-26	Personal Spending	0.6	0.8	high	17.48
2024-04-26	Michigan 5 Year Inflation Expectations	3.0	2.8	low	17.48
2024-04-26	Consumer Confidence	77.8	79.4	medium	17.48
2024-04-29	Dallas Fed Manufacturing Index	nan	-14.4	medium	12.39
2024-04-30	Chicago PMI	nan	41.4	medium	12.07
2024-05-01	Mortgage Rate	nan	7.24	low	16.5
2024-05-01	Mortgage Applications	nan	-2.7	low	16.5
2024-05-01	MBA Mortgage Refinance Index	nan	472.7	low	16.5
2024-05-01	MBA Purchase Index	nan	144.2	low	16.5
2024-05-01	Manufacturing PMI	49.9	51.9	medium	16.5

# SPX Implied Volatility Skew -- OpEx: Fri May 17 2024



## Change In Fixed Strike Volatility



Date: 2024/04/25

Source: Drats/Tier1Alpha.com

## SPX Implied Volatility with Fixed Strike Vol

Expiration	Fri May 17 2024		Fri Jun 21 2024		Fri Jul 19 2024	
Strike	Implied Vol	FSV Change	Implied Vol	FSV Change	Implied Vol	FSV Change
4400.0	28.52	1.5	23.9	0.58	20.44	0.19
4450.0	27.05	1.41	23.06	0.59	19.77	0.17
4500.0	25.64	1.34	22.21	0.52	19.12	0.15
4550.0	24.19	1.19	21.37	0.45	18.46	0.13
4600.0	22.91	1.13	20.57	0.41	17.84	0.11
4650.0	21.56	0.94	19.79	0.34	17.23	0.09
4700.0	20.36	0.76	19.03	0.27	16.63	0.05
4750.0	19.23	0.57	18.3	0.21	16.06	0.03
4800.0	18.2	0.45	17.58	0.15	15.5	0.01
4850.0	17.26	0.32	16.89	0.1	14.97	-0.01
4900.0	16.4	0.19	16.28	0.13	14.45	-0.05
4950.0	15.6	0.12	15.64	0.1	14.06	0.01
5000.0	14.79	0.0	15.02	0.06	13.55	-0.08
5050.0	13.96	-0.17	14.42	0.0	13.13	-0.12
5100.0	13.5	-0.04	13.95	0.03	12.74	-0.17
5150.0	12.85	-0.17	13.38	-0.07	12.41	-0.19
5200.0	12.32	-0.3	12.92	-0.11	12.1	-0.24
5250.0	11.9	-0.4	12.5	-0.18	11.82	-0.28
5300.0	11.51	-0.6	12.13	-0.24	11.59	-0.31
5350.0	11.37	-0.77	11.82	-0.3	11.38	-0.37
5400.0	11.48	-0.82	11.51	-0.38	11.22	-0.41
5450.0	11.86	-0.95	11.24	-0.46	11.08	-0.46
5500.0	12.37	-1.17	11.06	-0.51	11.0	-0.45
5550.0	12.96	-1.38	10.95	-0.54	10.95	-0.52
5600.0	13.84	-1.22	10.93	-0.57	10.99	-0.52
5650.0	14.81	-1.23	10.98	-0.6	11.04	-0.57
5700.0	15.98	-1.2	11.15	-0.64	11.16	-0.63

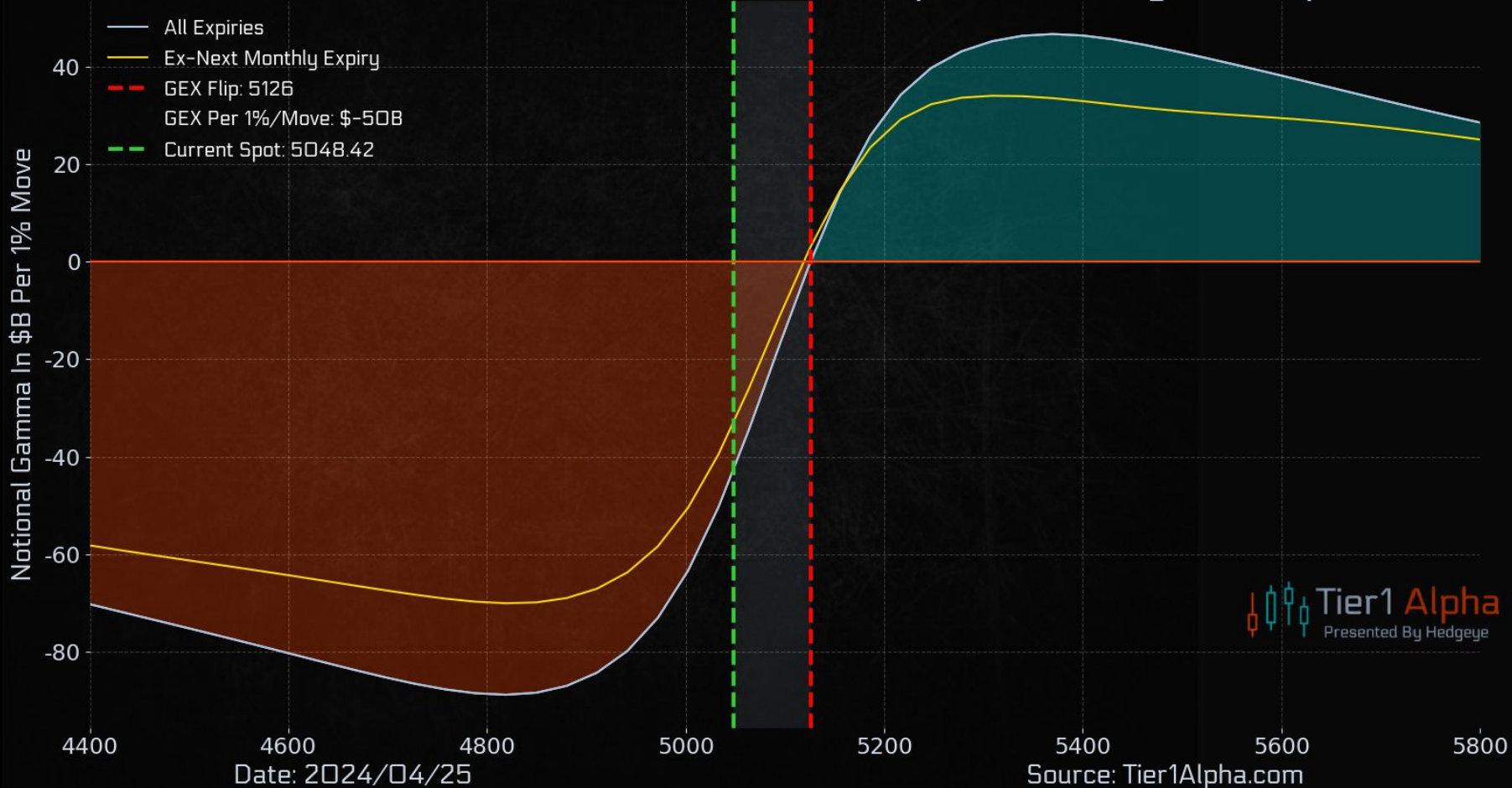
# SPX Probable Volatility & Put/Call Gamma By Strike, Weighted Expirations



Date: 2024/04/25

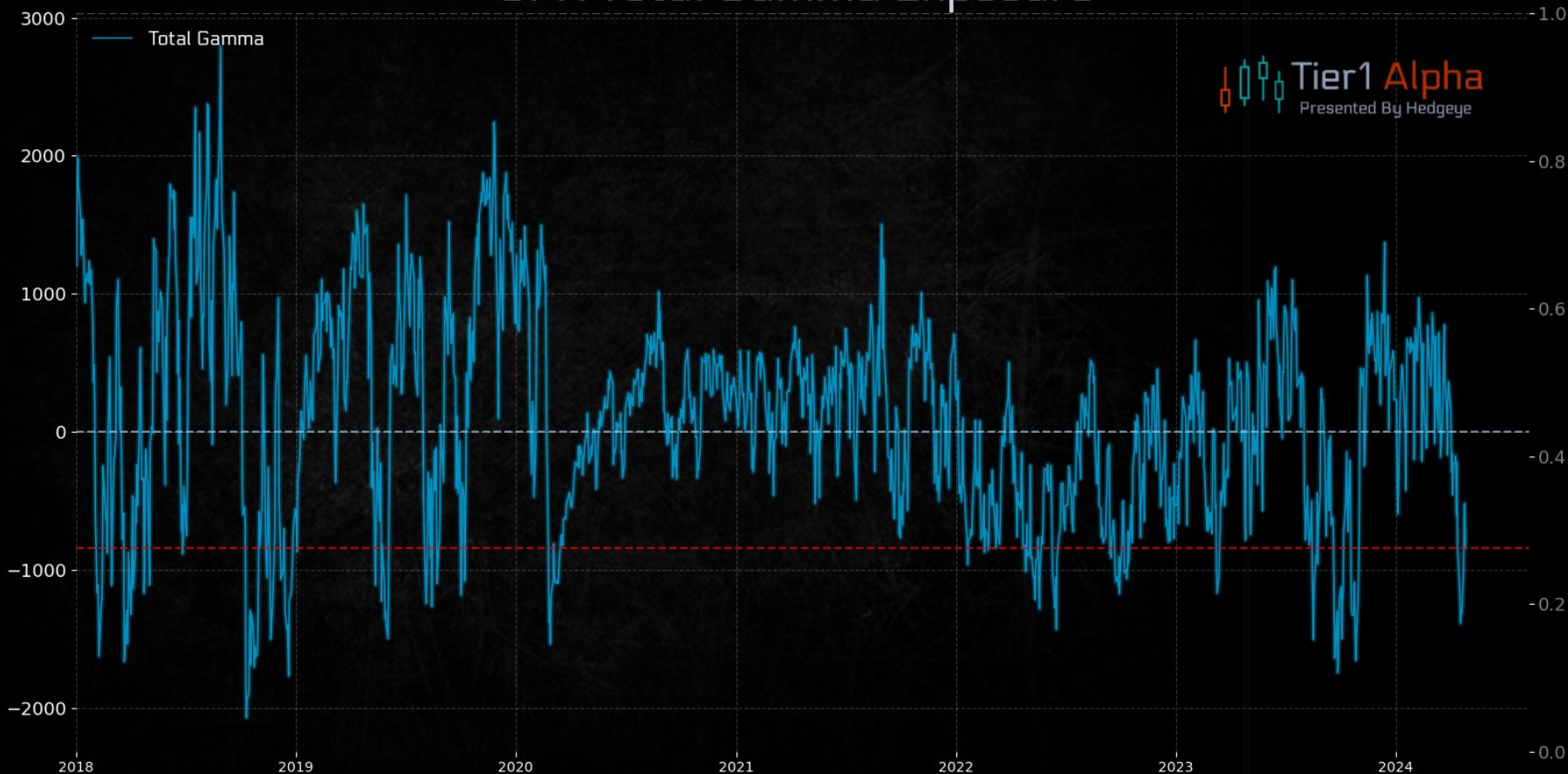
Source: Intrinio/ Tier1Alpha.com

# S&P 500 (SPX) Estimated Dealer Gamma Exposure - Weighted Expirations



Tier1 Alpha  
Presented By Hedgeye

# SPX Total Gamma Exposure



Tier1 Alpha  
Presented By Hedgeye

Date: 2024/04/25

Source: Tier1Alpha.com



# SPX Dealer Gamma Exposure By Regime

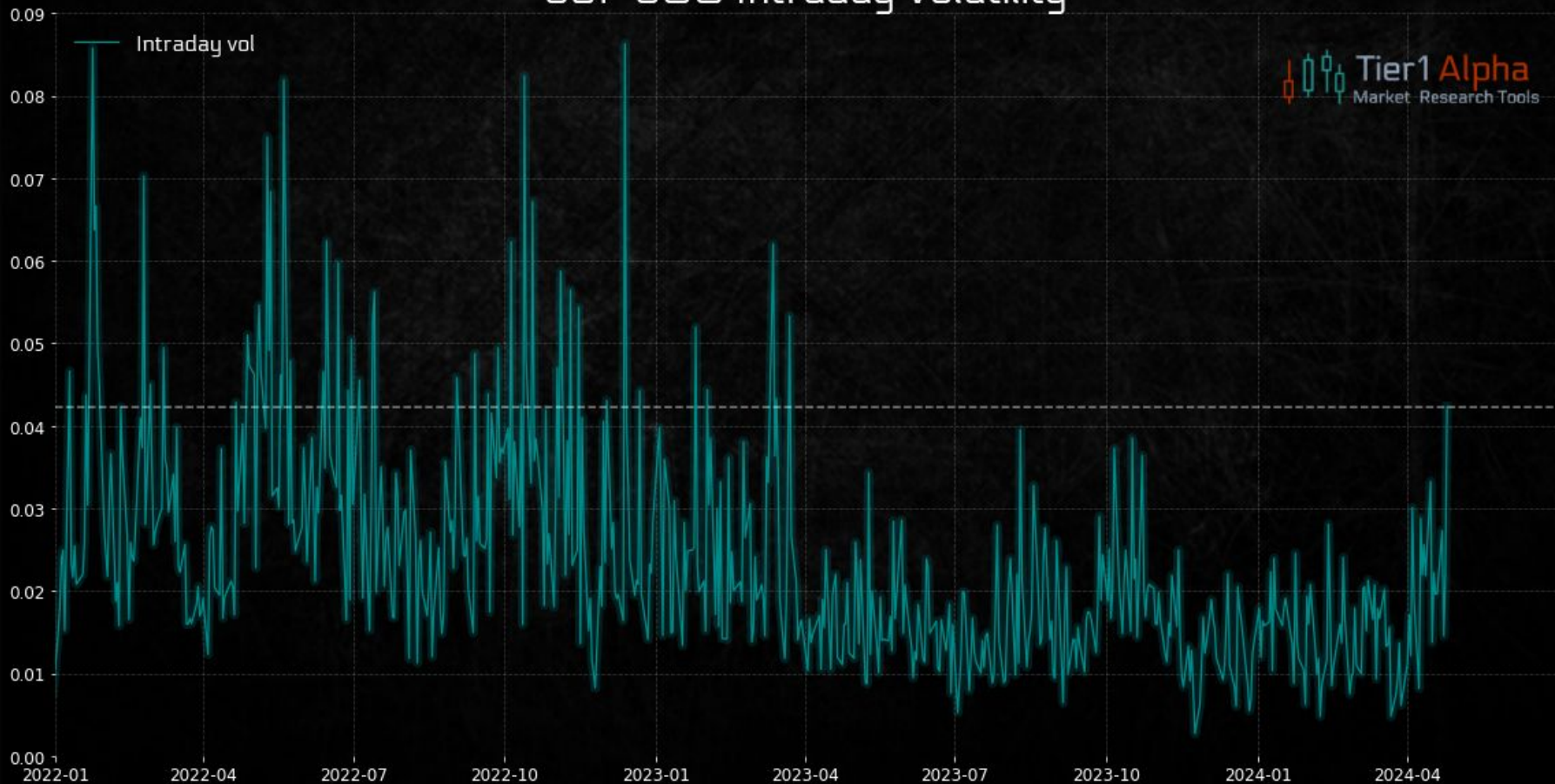


Date: 2024/04/25

Source: Tier1Alpha.com

Tier1 Alpha  
Presented By Hedgeye

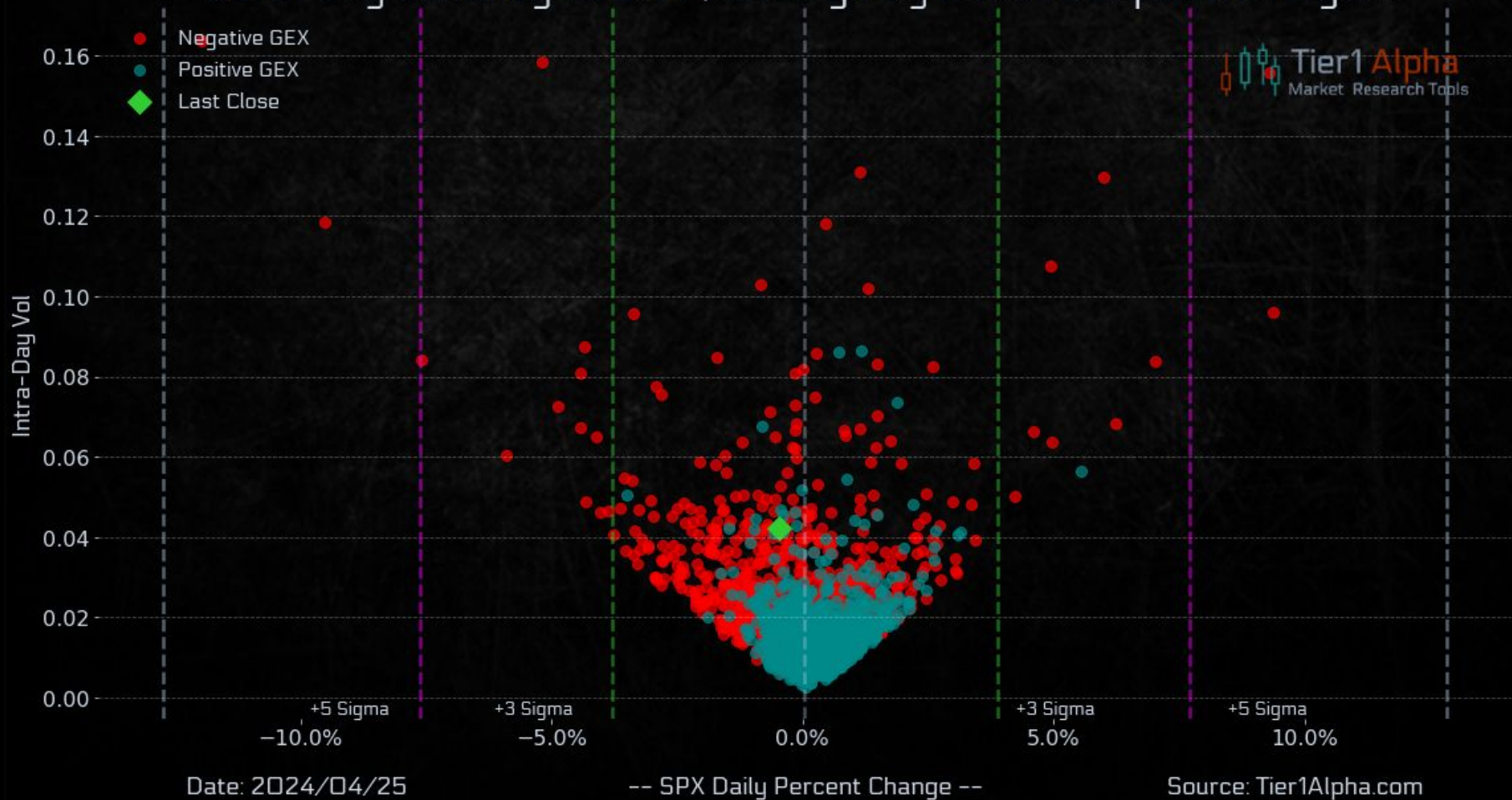
# S&P 500 Intraday Volatility



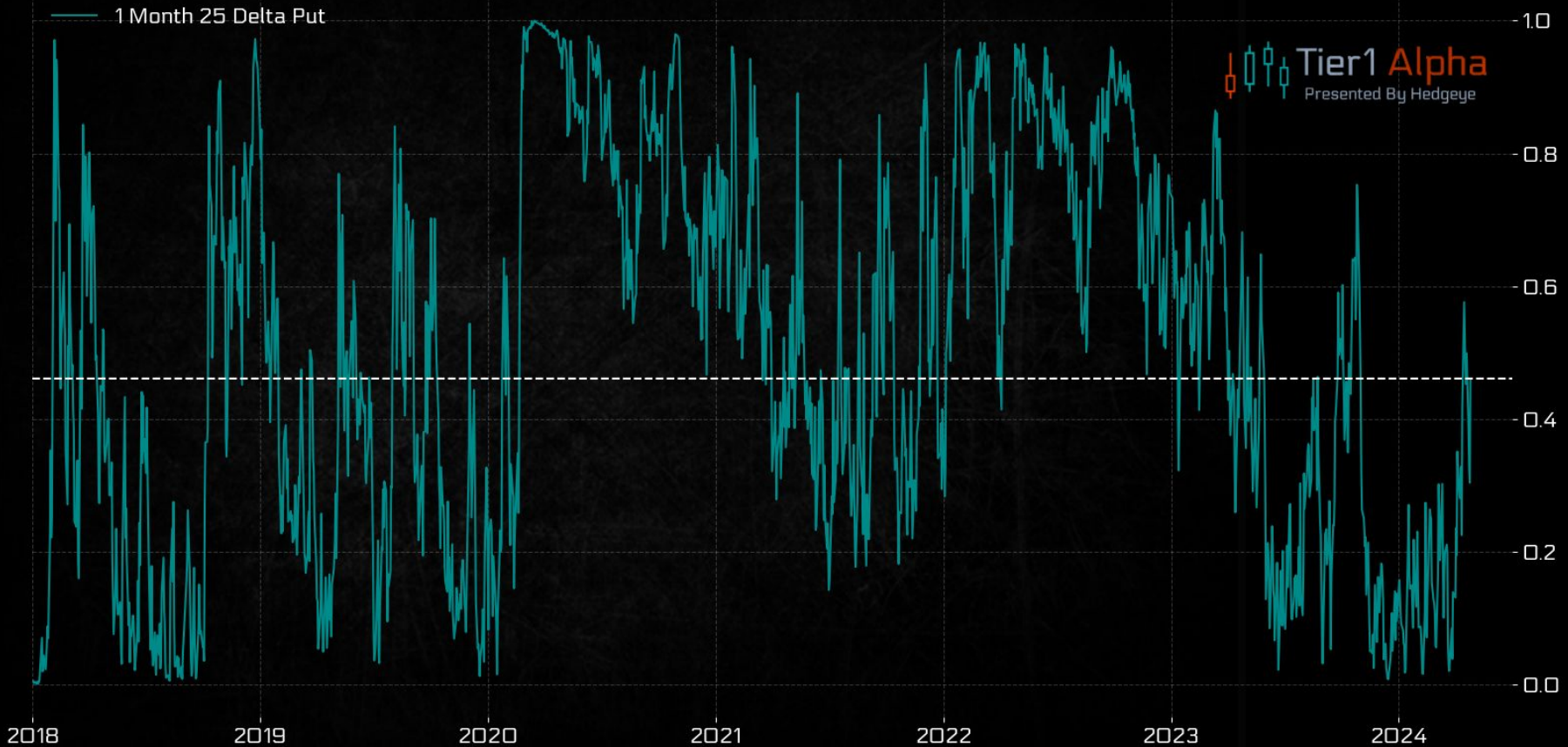
Date: 2024/04/25

Source: Tier1Alpha.com

# Intra-Day Volatility vs SPX %Change By Gamma Exposure Regime



# Rolling Cost of 1 Month 25 Delta Put Options Percentile Rank

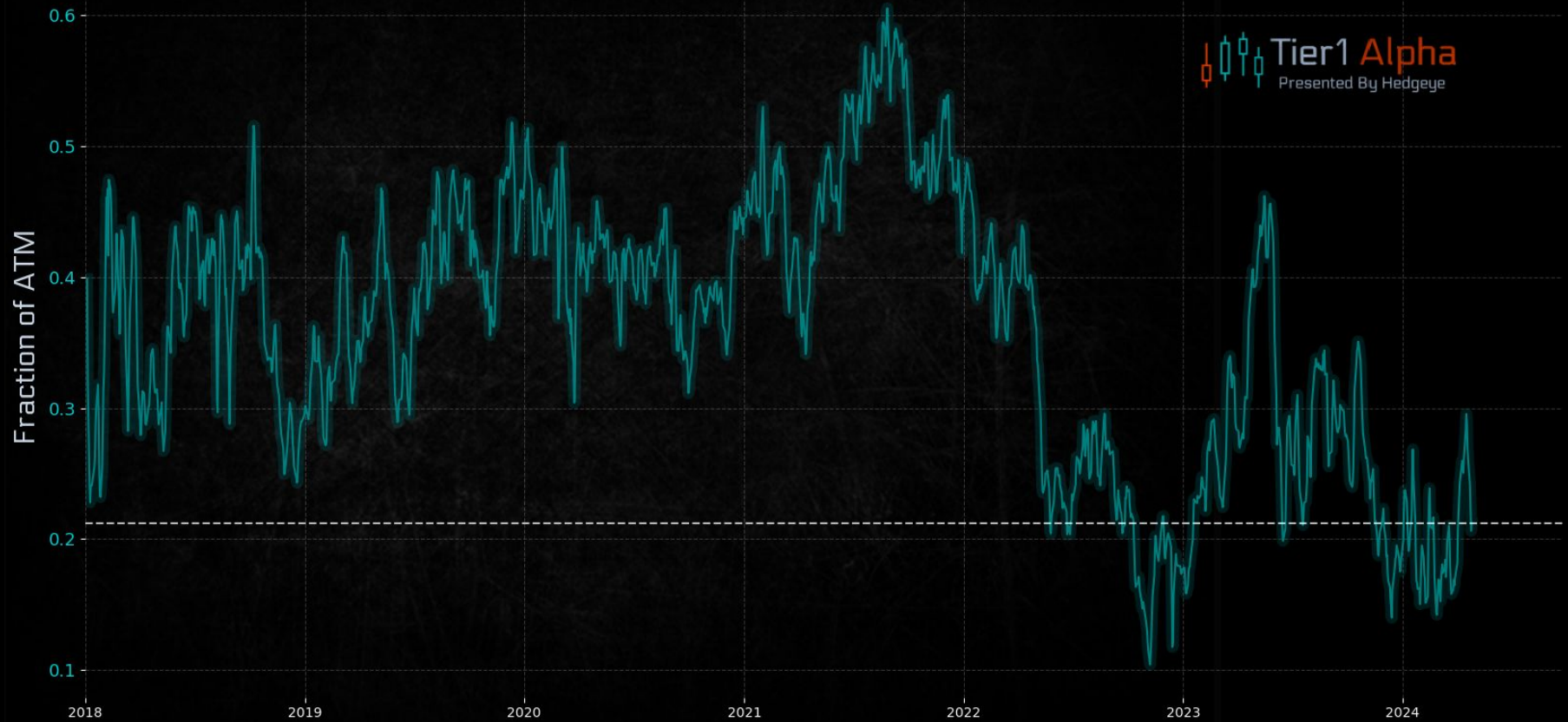


Tier1 Alpha  
Presented By Hedgeye

Date: 2024/04/25

Source: Tier1Alpha.com

# 1-Month 25-Delta Put vs 25-Delta Call Implied Volatility Skew, Normalized



Tier1 Alpha  
Presented By Hedgeye

Date: 2024/04/25

Source: Tier1Alpha.com

SPX+SPXW ODTE Put/Call Ratio Open Interest 5d Avg.



SPX+SPXW ODTE Put/Call Ratio Volume 5d Avg.

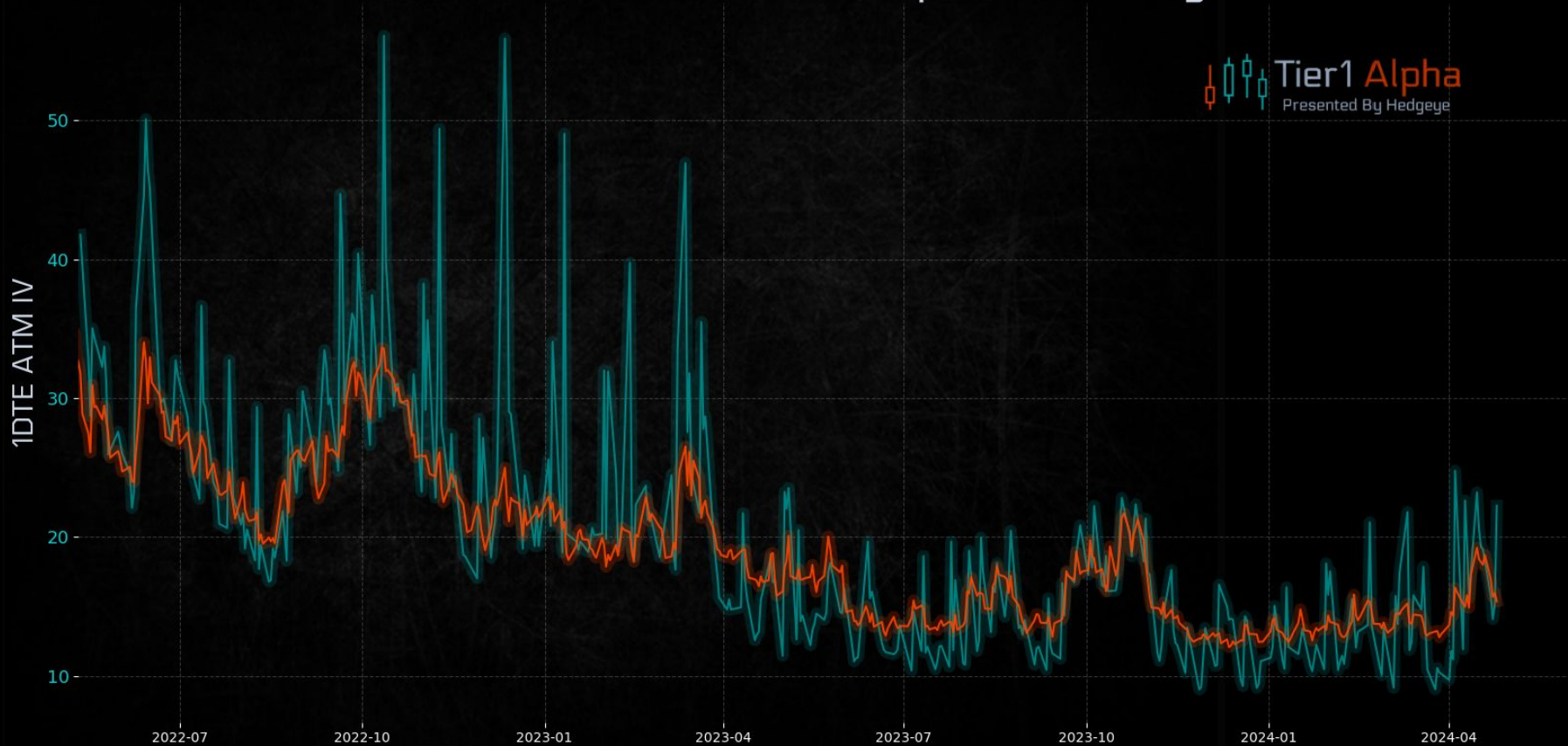


Date: 2024/04/25

Source: Intrinio/Tier1Alpha.com

# SPX 1DTE 50-Delta Implied Volatility

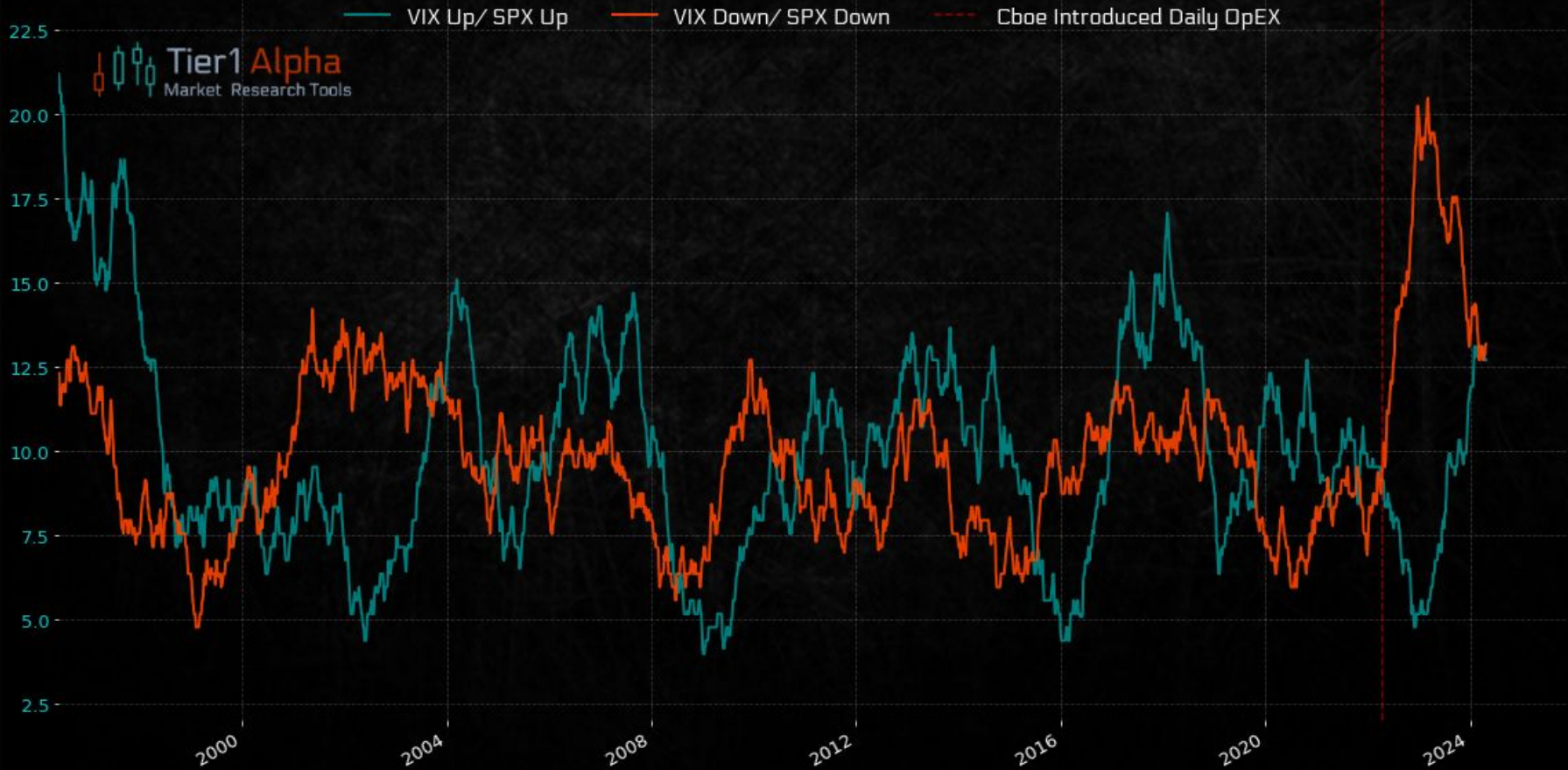
Tier1 Alpha  
Presented By Hedgeye



Date: 2024/04/25

Source: Tier1Alpha.com

# S&P 500 and VIX Co-Movement: Positive and Negative Returns Over Rolling 252-Day Period



Date: 2024/04/25

Source: Tier1Alpha.com



# Nasdaq 100 (NDX) Probable Volatility & Put/Call Gamma By Strike, Weighted Expirations



Date: 2024/04/25

Source: Intrinio/Tier1Alpha.com

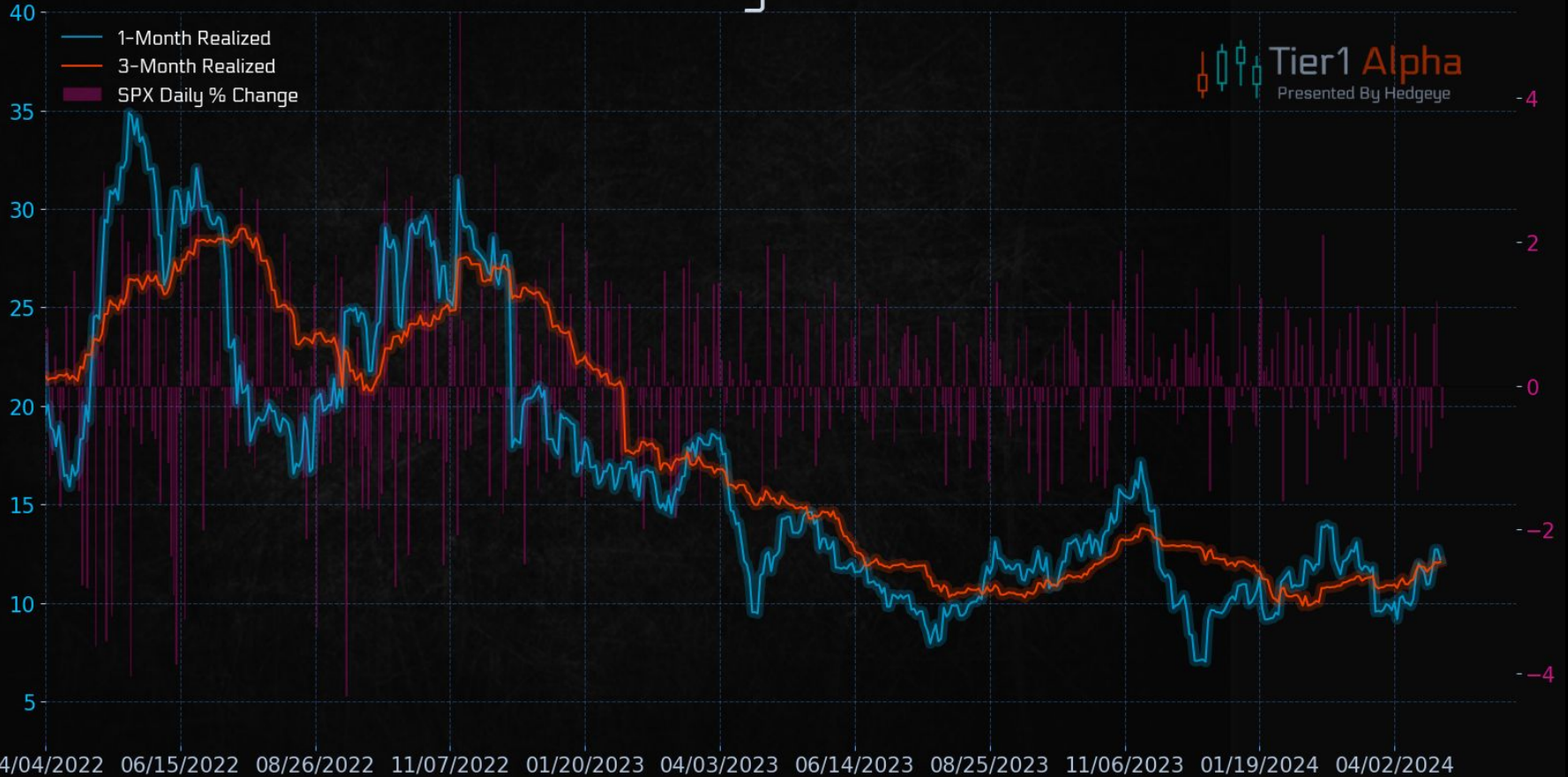
# Russell 2000 Probable Volatility & Put/Call Gamma By Strike, Weighted Expirations



Date: 2024/04/25

Source: Intrinio/ Tier1Alpha.com

# SPX Realized Volatility -- 1 Month vs 3 Month



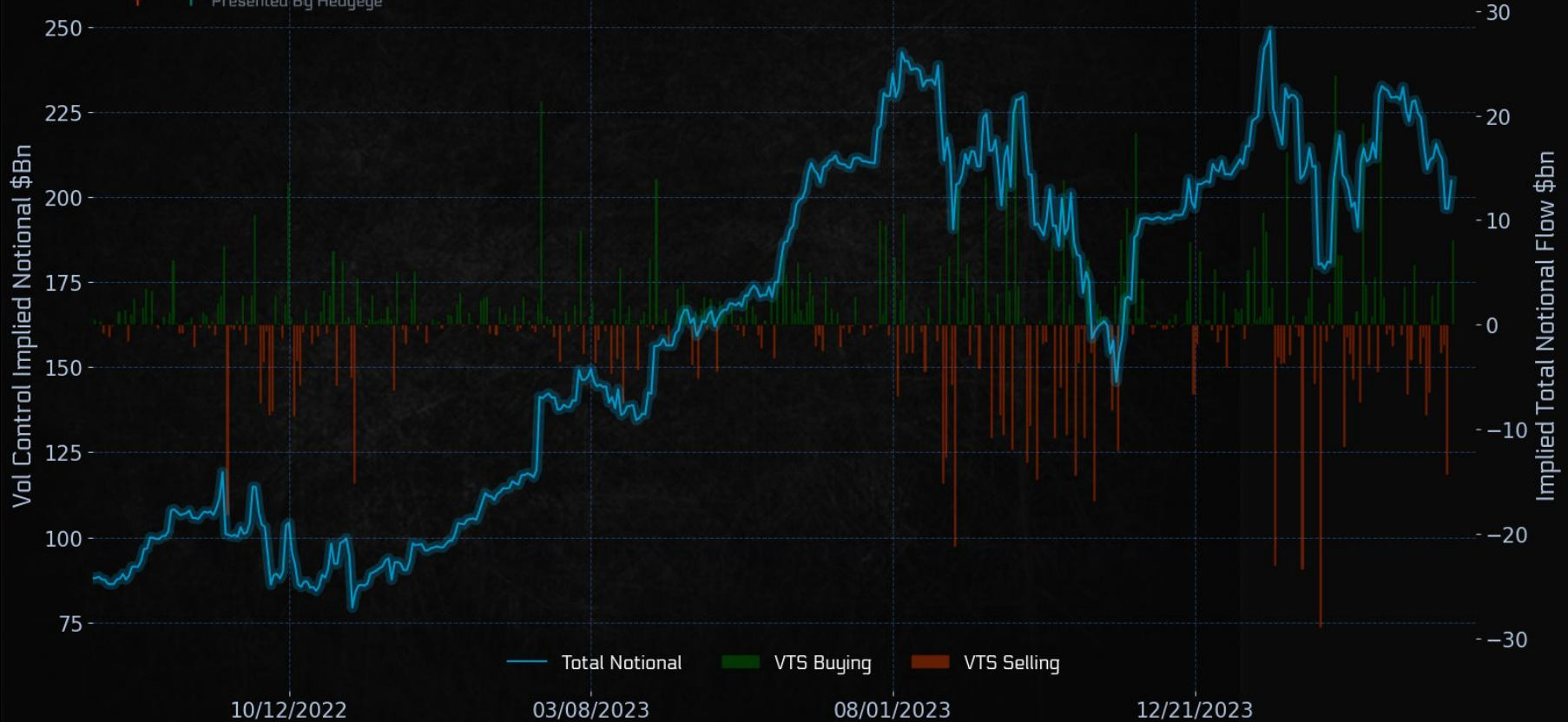
Tier1 Alpha  
Presented By Hedgeye

Date: 2024/04/25

Source: Tier1Alpha.com

# Vol Control Implied Notional Flows

Tier1 Alpha  
Presented By Hedgeye

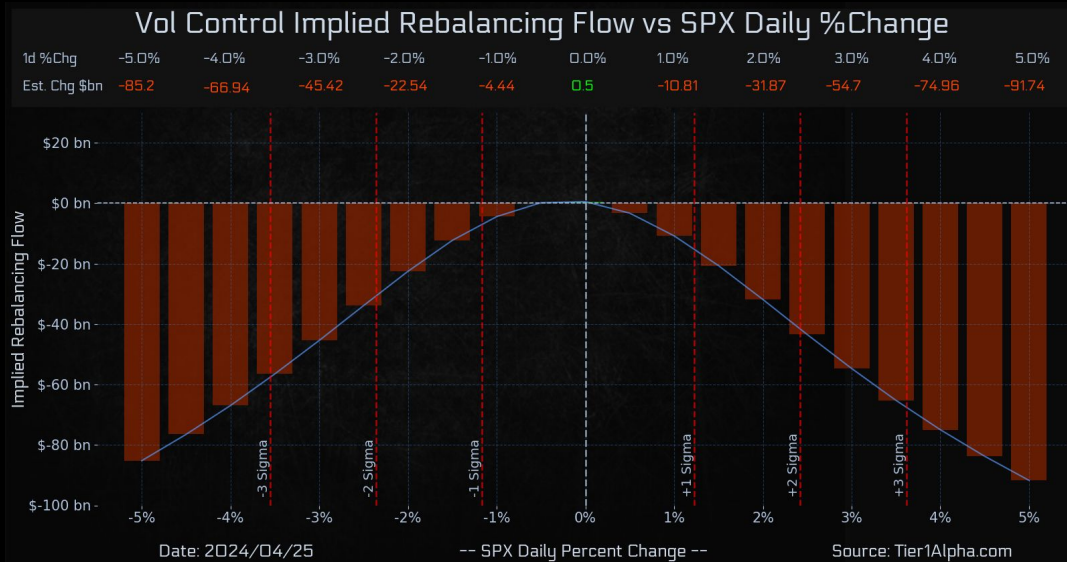


Date: 2024/04/25

Source: Tier1Alpha.com

### SPX Realized Vol Data In Sample for 2024-04-26

Dropoff	1m Dates	1m Drop %	3m Dates	3m Drop %
T+1	2024-03-28	0.1%	2024-01-29	0.8%
T+2	2024-04-01	-0.2%	2024-01-30	-0.1%
T+3	2024-04-02	-0.7%	2024-01-31	-1.6%
T+4	2024-04-03	0.1%	2024-02-01	1.2%
T+5	2024-04-04	-1.2%	2024-02-02	1.1%
T+6	2024-04-05	1.1%	2024-02-05	-0.3%
T+7	2024-04-08	-0.0%	2024-02-06	0.2%
T+8	2024-04-09	0.1%	2024-02-07	0.8%
T+9	2024-04-10	-1.0%	2024-02-08	0.1%
T+10	2024-04-11	0.7%	2024-02-09	0.6%

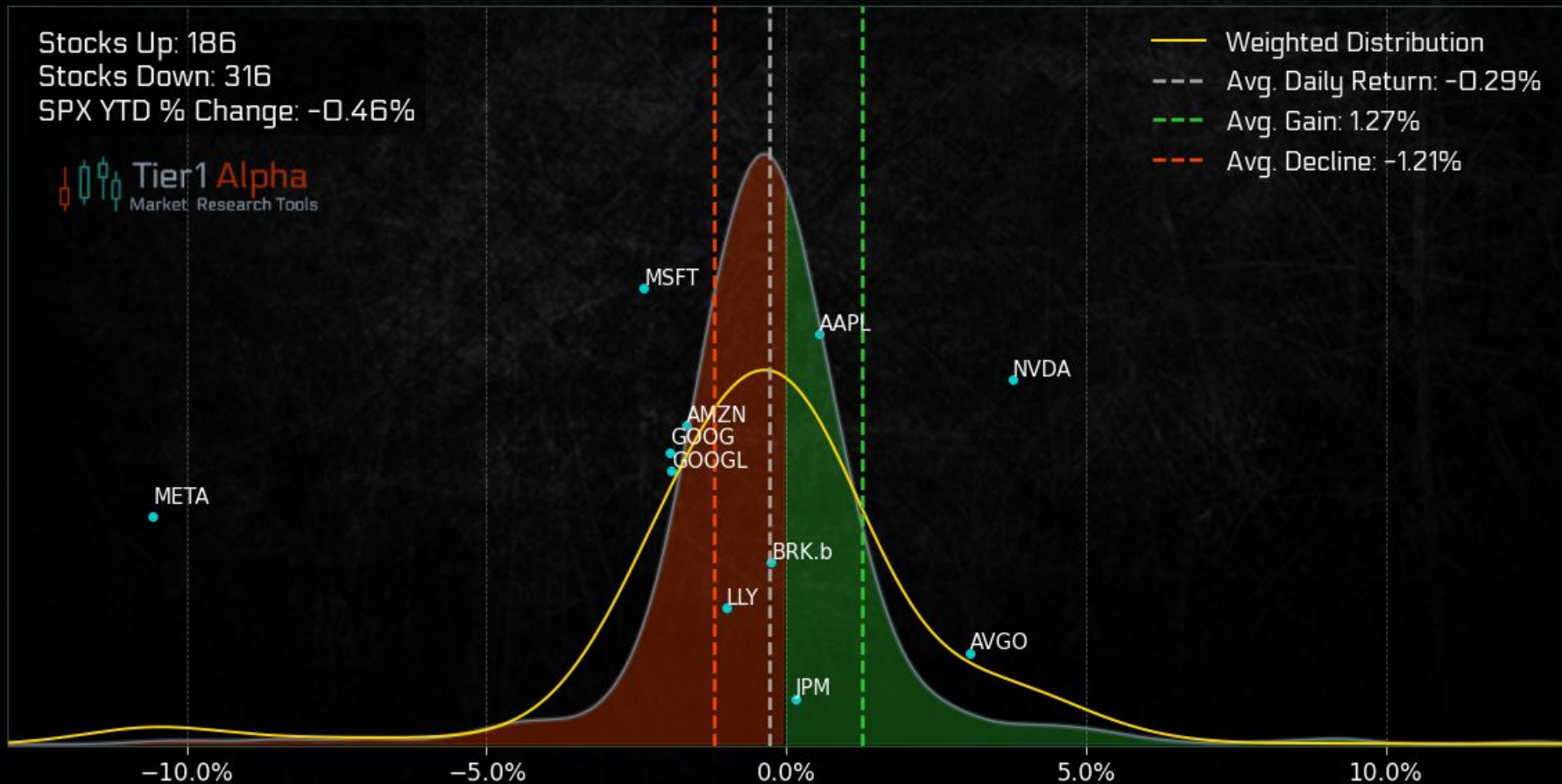


# S&P 500 MBAD Indicator for 2024/04/25

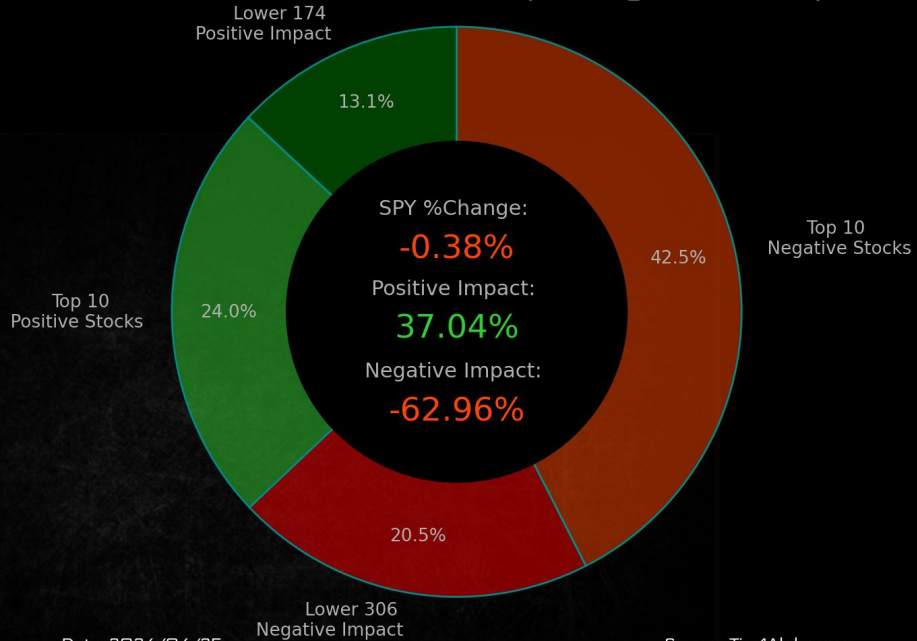
Stocks Up: 186  
Stocks Down: 316  
SPX YTD % Change: -0.46%



- Weighted Distribution
- - - Avg. Daily Return: -0.29%
- - - Avg. Gain: 1.27%
- - - Avg. Decline: -1.21%



## SPX Constituents Relative Impact By Market Cap



## SPX Constituents Relative Impact By Market Cap

### Largest Positive Impact

### Largest Negative Impact

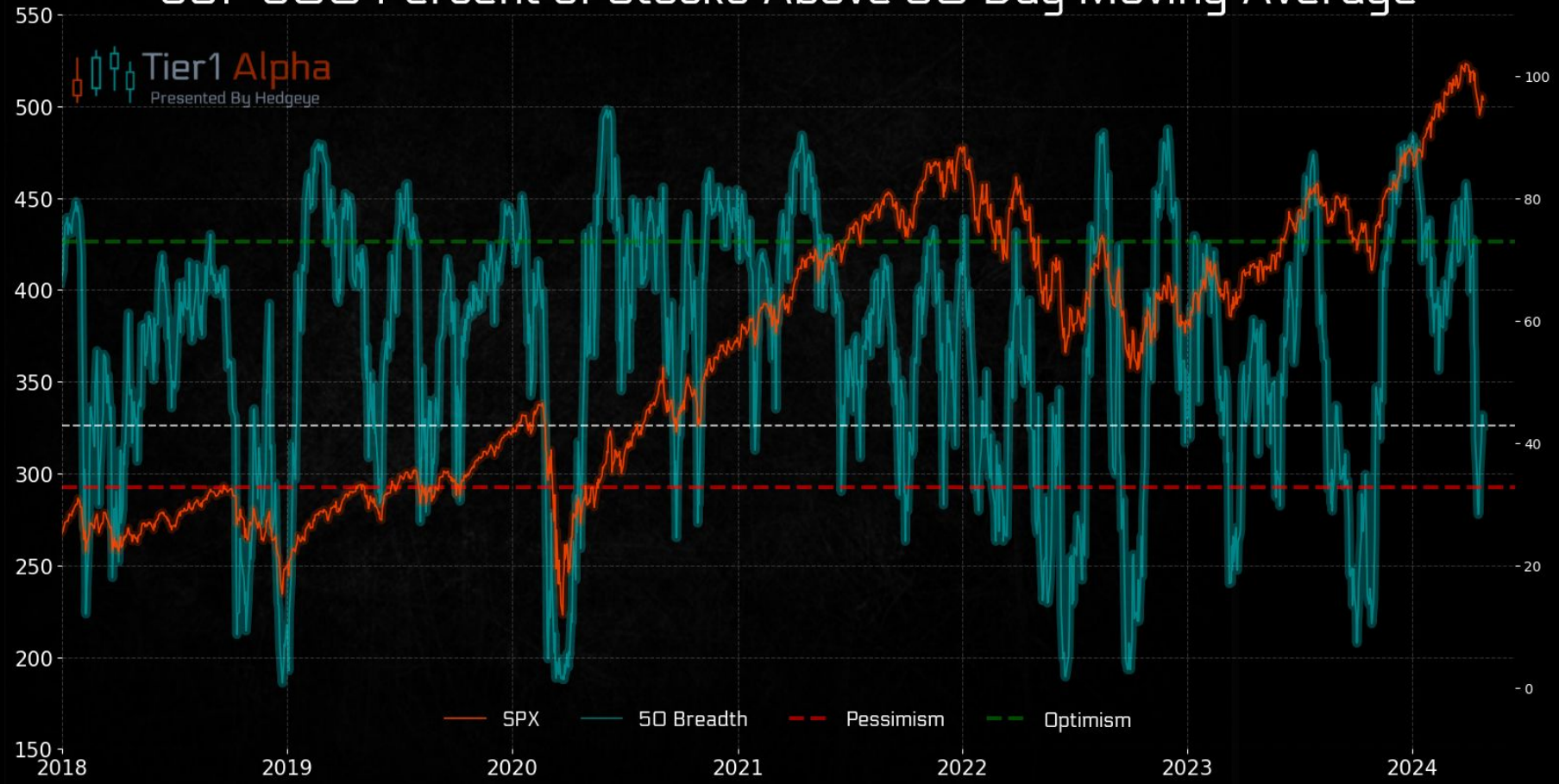
Top Contributor	Daily %Return	Positive Impact	% Weight	Top Detractor	Daily %Return.1	Negative Impact	% Weight.1
NVDA	3.8%	11.3%	4.97%	META	-10.6%	-16.6%	2.62%
TSLA	5.0%	3.0%	0.99%	MSFT	-2.4%	-10.2%	7.14%
AVGO	3.1%	2.4%	1.32%	AMZN	-1.7%	-3.9%	3.89%
AAPL	0.5%	1.9%	5.76%	GOOGL	-1.9%	-2.5%	2.19%
MRK	2.9%	1.3%	0.75%	GOOG	-1.9%	-2.2%	1.85%
UNP	5.0%	1.0%	0.33%	IBM	-8.3%	-1.9%	0.39%
UNH	1.3%	0.9%	1.08%	CAT	-7.0%	-1.8%	0.43%
NEM	12.5%	0.8%	0.11%	CMCSA	-5.8%	-1.3%	0.37%
CMG	6.3%	0.7%	0.19%	BMJ	-8.5%	-1.2%	0.23%
NFLX	1.8%	0.7%	0.63%	NOW	-4.0%	-0.9%	0.36%

Date: 2024/04/25

Source: Tier1Alpha.com

# S&P 500 Percent of Stocks Above 50 Day Moving Average

Tier1 Alpha  
Presented By Hedgeye



Date: 2024/04/25

Source: IEX Cloud/ Tier1Alpha.com





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