



Market Structure Report

04-30-2024

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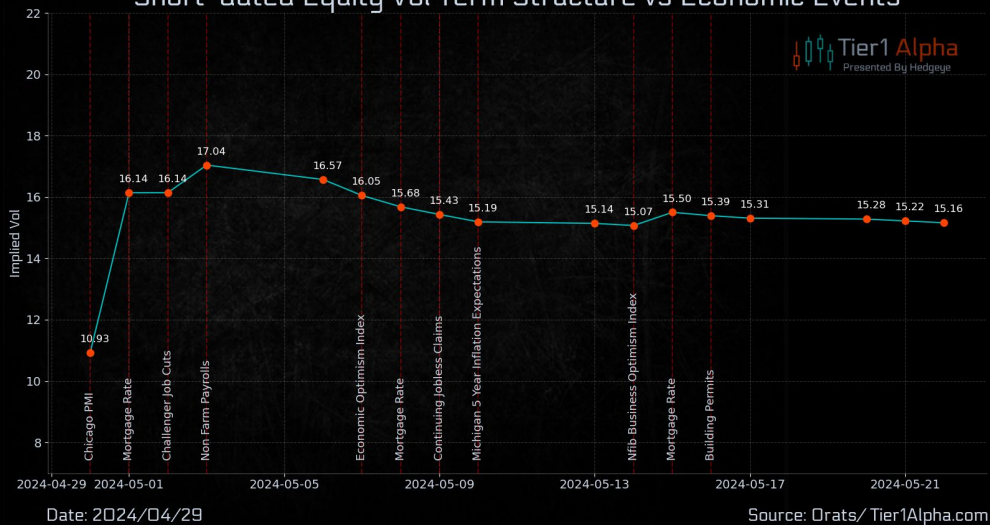
Data provided by: <https://intrinio.com/>

Summary:

- Dealers remain in a neutral setup, which implies they are broadly well-hedged around the current levels. However, market makers are still broadly short-gamma, as our GEX flipping point shifted higher to the 5136 level.
- The 5100 strike is expected to remain the focal point in the near term. However, we want to reiterate the steepness of our Gamma curve, which indicates that a quick visit to the 5000 strike is still a possibility.
- Structurally, if the market moves lower, dealers would be forced to aggressively sell futures to hedge their delta exposure, likely accelerating the move back down to those levels.
- We're not sure if that bearish setup will materialize or not, but at this point, we cannot rule it out either, so stay cautious of any downside moves.
- Surprisingly, SPX options volume was exceptionally low yesterday, which we believe contributed to a modest rise in fixed strike volatility.
- When liquidity is poor, bid-ask spreads on options contracts tend to widen as market makers increase spreads to compensate for the increased risk they face, which ultimately can drive implied volatility levels higher.
- Going forward, it will be much harder for both the 1-month and 3-month realized volatilities to move much higher, as several volatile returns will be dropping out of the sample.
- As realized volatility falls, Vol control strategies will be forced to mechanically increase their equity allocations in order to maintain their predefined volatility targets, which usually range from 10-15%.
- Over that time frame, we're also expecting CTAs to continue building back their equity allocations, which together will introduce some much-needed bullish flow into the market.
- That said, it's important to keep an eye on realized volatility levels, as any larger increases driven by negative gamma, or an exogenous event, could quickly derail these supportive flows.

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

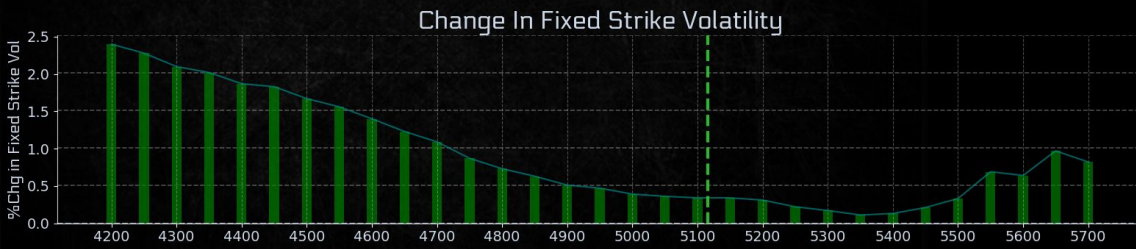
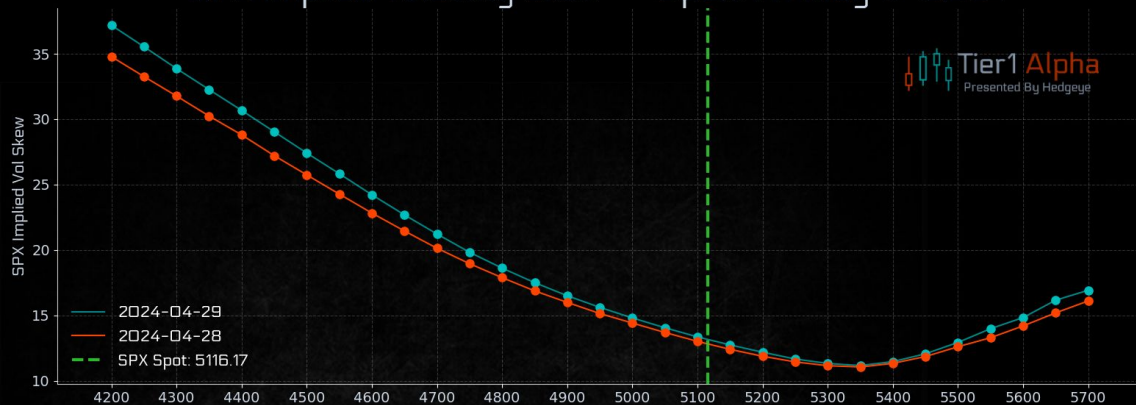
Short-dated Equity Vol Term Structure vs Economic Events



Economic Event Calendar

Date	Event	Estimate	Previous	Impact	SPX IV
2024-04-30	Chicago PMI	44.9	41.4	medium	10.93
2024-05-01	Mortgage Rate	nan	7.24	low	15.95
2024-05-01	Mortgage Applications	nan	-2.7	low	15.95
2024-05-01	MBA Mortgage Refinance Index	nan	472.7	low	15.95
2024-05-01	MBA Purchase Index	nan	144.2	low	15.95
2024-05-01	Manufacturing PMI	49.9	51.9	medium	15.95
2024-05-01	ISM Manufacturing Employment	nan	47.4	medium	15.95
2024-05-01	ISM Manufacturing New Orders	nan	51.4	low	15.95
2024-05-01	Business Confidence	50.1	50.3	high	15.95
2024-05-01	ISM Manufacturing Prices	55.6	55.8	low	15.95
2024-05-01	Job Offers	8.68	8.756	high	15.95
2024-05-02	Challenger Job Cuts	nan	90.309	low	15.96

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



Date: 2024/04/29

Source: Orats/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	28.8	0.28	23.61	-0.29	20.27	-0.17
4450.0	27.21	0.16	22.71	-0.35	19.6	-0.17
4500.0	25.74	0.1	21.86	-0.35	18.95	-0.17
4550.0	24.27	0.08	21.02	-0.35	18.31	-0.15
4600.0	22.82	-0.09	20.23	-0.34	17.69	-0.15
4650.0	21.45	-0.11	19.48	-0.31	17.09	-0.14
4700.0	20.13	-0.23	18.73	-0.3	16.5	-0.13
4750.0	18.95	-0.28	18.02	-0.28	15.94	-0.12
4800.0	17.88	-0.32	17.34	-0.24	15.4	-0.1
4850.0	16.87	-0.39	16.66	-0.23	14.88	-0.09
4900.0	15.99	-0.41	16.02	-0.26	14.37	-0.08
4950.0	15.14	-0.46	15.42	-0.22	13.9	-0.05
5000.0	14.41	-0.38	14.81	-0.21	13.47	-0.08
5050.0	13.69	-0.37	14.24	-0.18	13.05	-0.08
5100.0	13.01	-0.49	13.69	-0.17	12.67	-0.07
5150.0	12.4	-0.45	13.18	-0.2	12.32	-0.09
5200.0	11.87	-0.45	12.74	-0.18	12.01	-0.09
5250.0	11.44	-0.46	12.32	-0.18	11.76	-0.06
5300.0	11.15	-0.36	11.96	-0.17	11.51	-0.08
5350.0	11.05	-0.32	11.64	-0.18	11.3	-0.08
5400.0	11.33	-0.15	11.36	-0.15	11.14	-0.08
5450.0	11.85	-0.01	11.13	-0.11	11.0	-0.08
5500.0	12.6	0.23	10.93	-0.13	10.93	-0.07
5550.0	13.29	0.33	10.81	-0.14	10.9	-0.05
5600.0	14.19	0.35	10.81	-0.12	10.94	-0.05
5650.0	15.19	0.38	10.92	-0.06	11.05	0.01
5700.0	16.1	0.12	11.1	-0.05	11.19	0.03

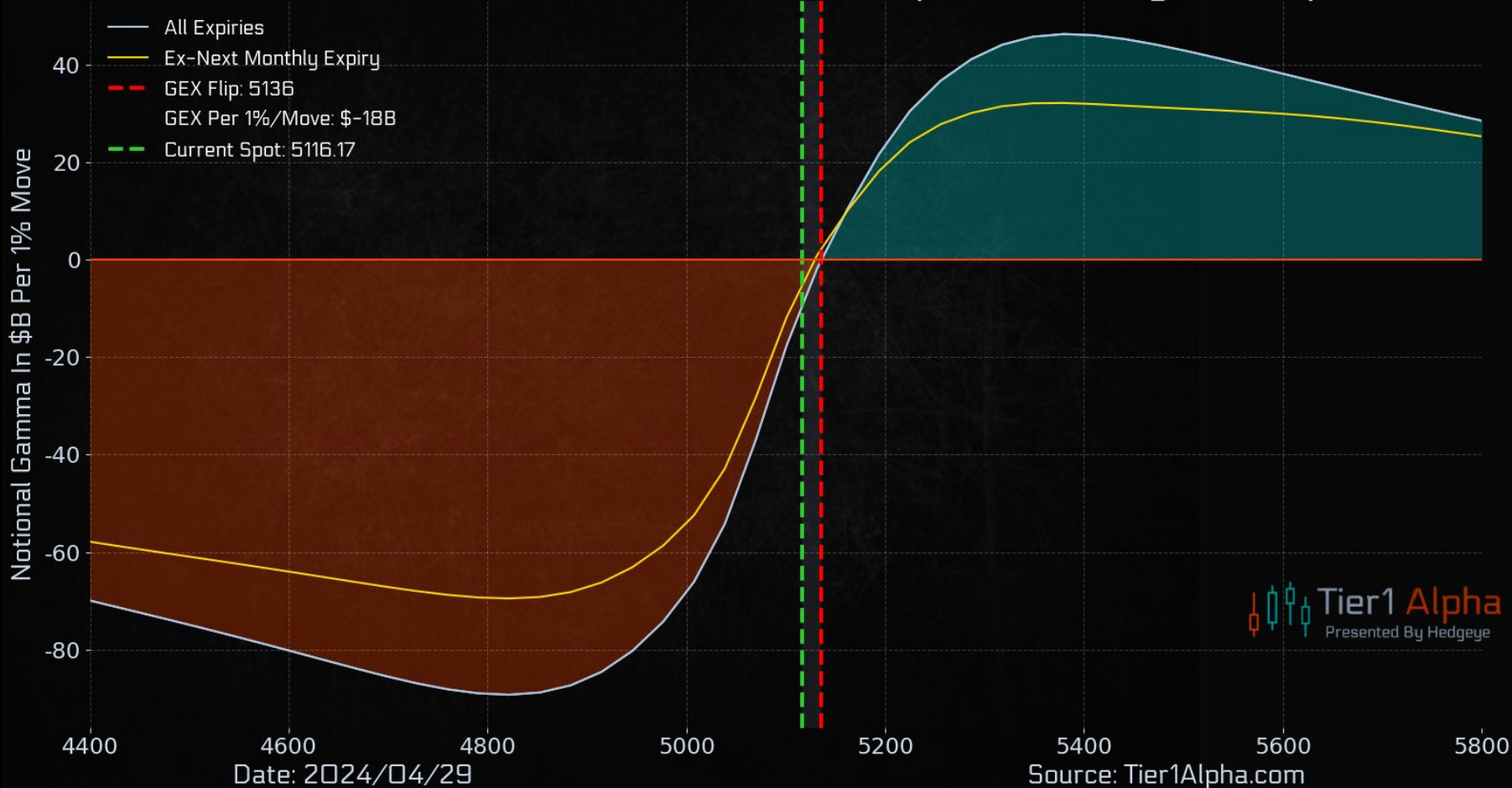
SPX Probable Volatility & Put/Call Gamma By Strike, Weighted Expirations



Date: 2024/04/29

Source: Intrinio/ Tier1Alpha.com

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



SPX Dealer Gamma Exposure By Regime

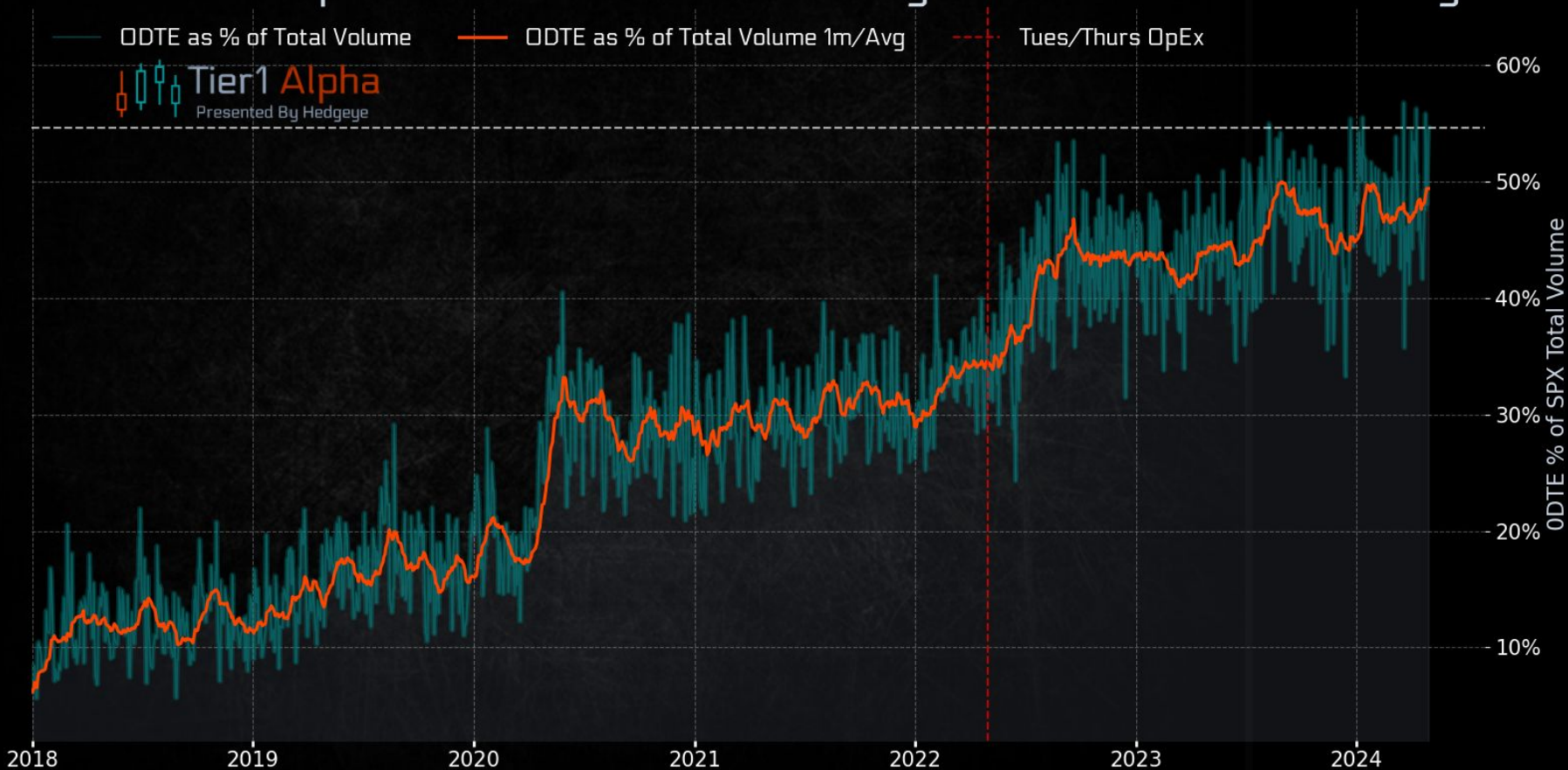


Date: 2024/04/29

Source: Tier1Alpha.com

 Tier1 Alpha
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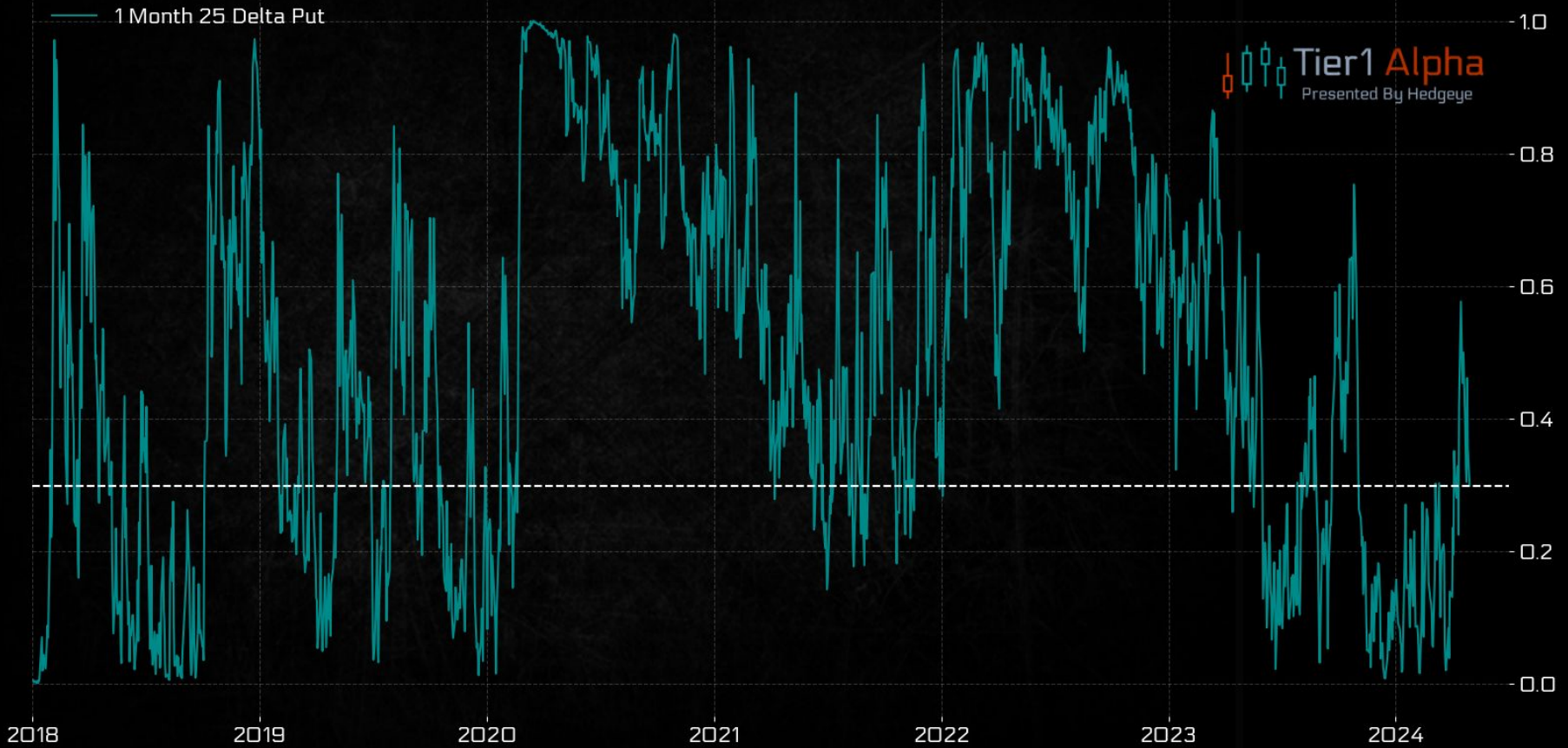
ODTE SPX Option Volume as a Percentage of Total Volume 1m Avg.



Date: 2024/04/29

Source: Tier1Alpha.com

Rolling Cost of 1 Month 25 Delta Put Options Percentile Rank

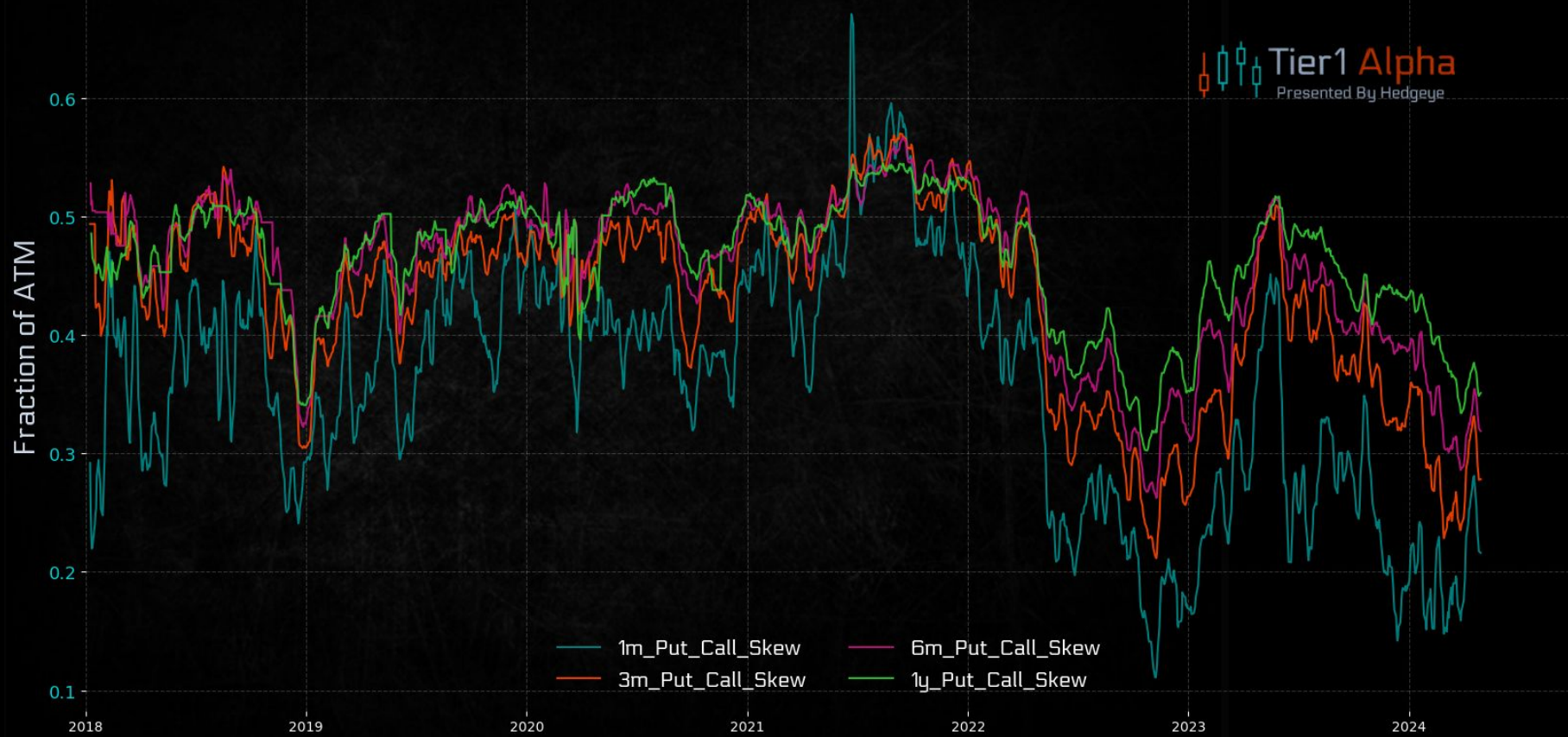


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Date: 2024/04/29

Source: Tier1Alpha.com

25-Delta Put vs 25-Delta Call Implied Volatility Skew, Constant Maturity, Normalized



Tier1 Alpha
Presented By Hedgeye

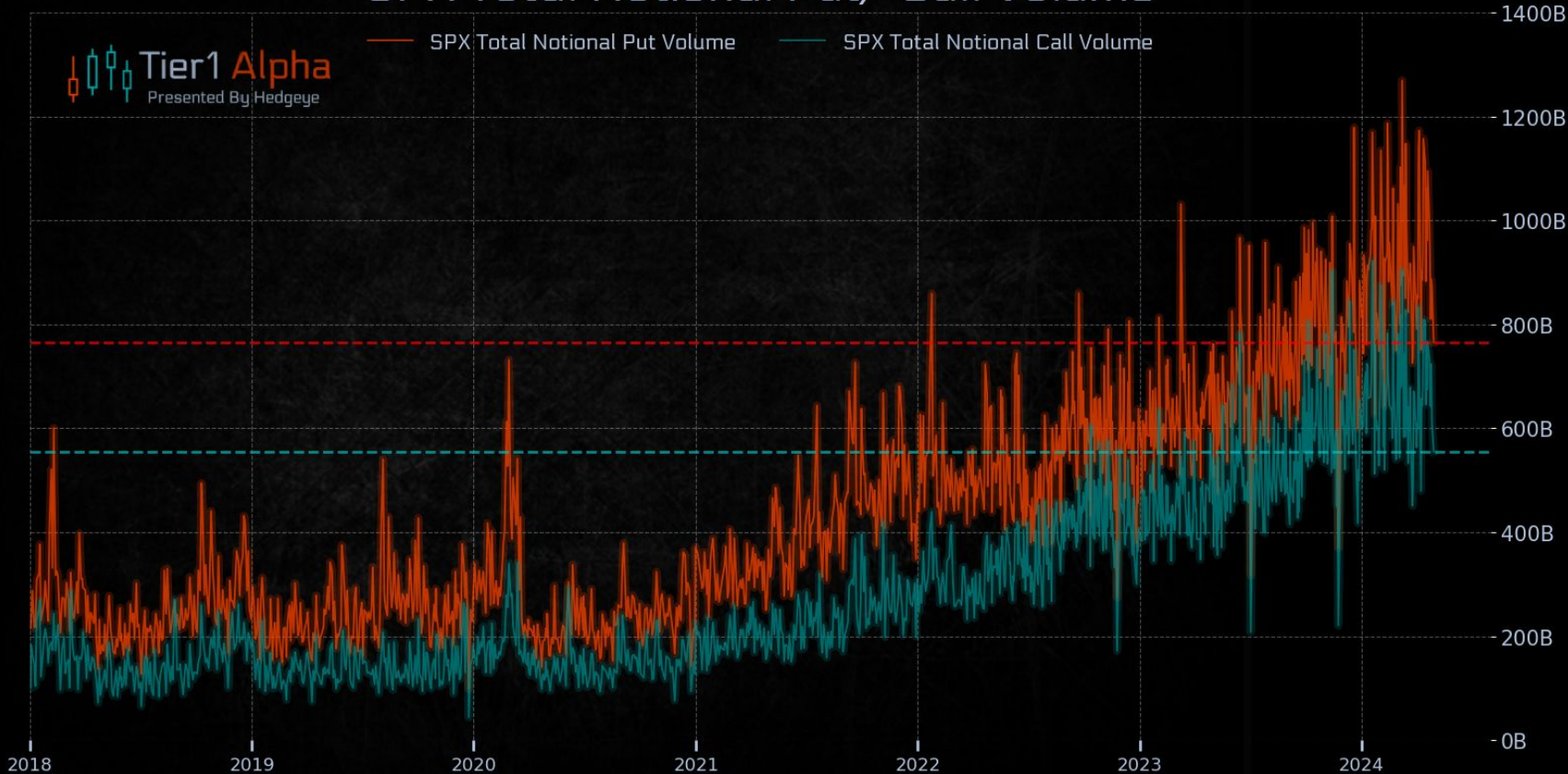
Date: 2024/04/29

Source: Tier1Alpha.com

SPX Total Notional Put/ Call Volume



— SPX Total Notional Put Volume — SPX Total Notional Call Volume



Date: 2024/04/30

*Not Investment Advice

Source: Tier1Alpha.com

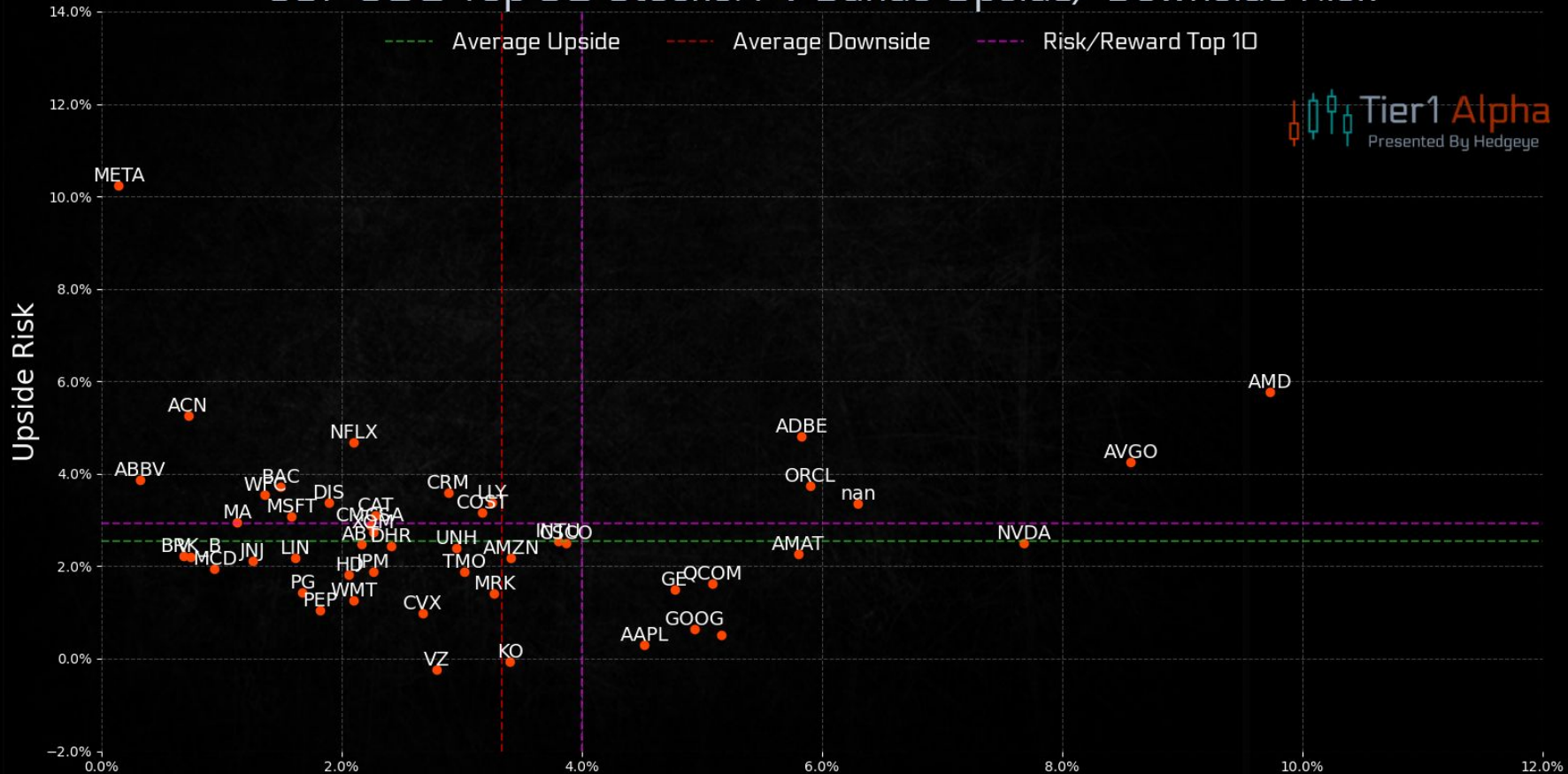
Nasdaq 100 (NDX) Probable Volatility & Put/Call Gamma By Strike, Weighted Expirations



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



S&P 500 Top 50 Stocks: PV Bands Upside/ Downside Risk

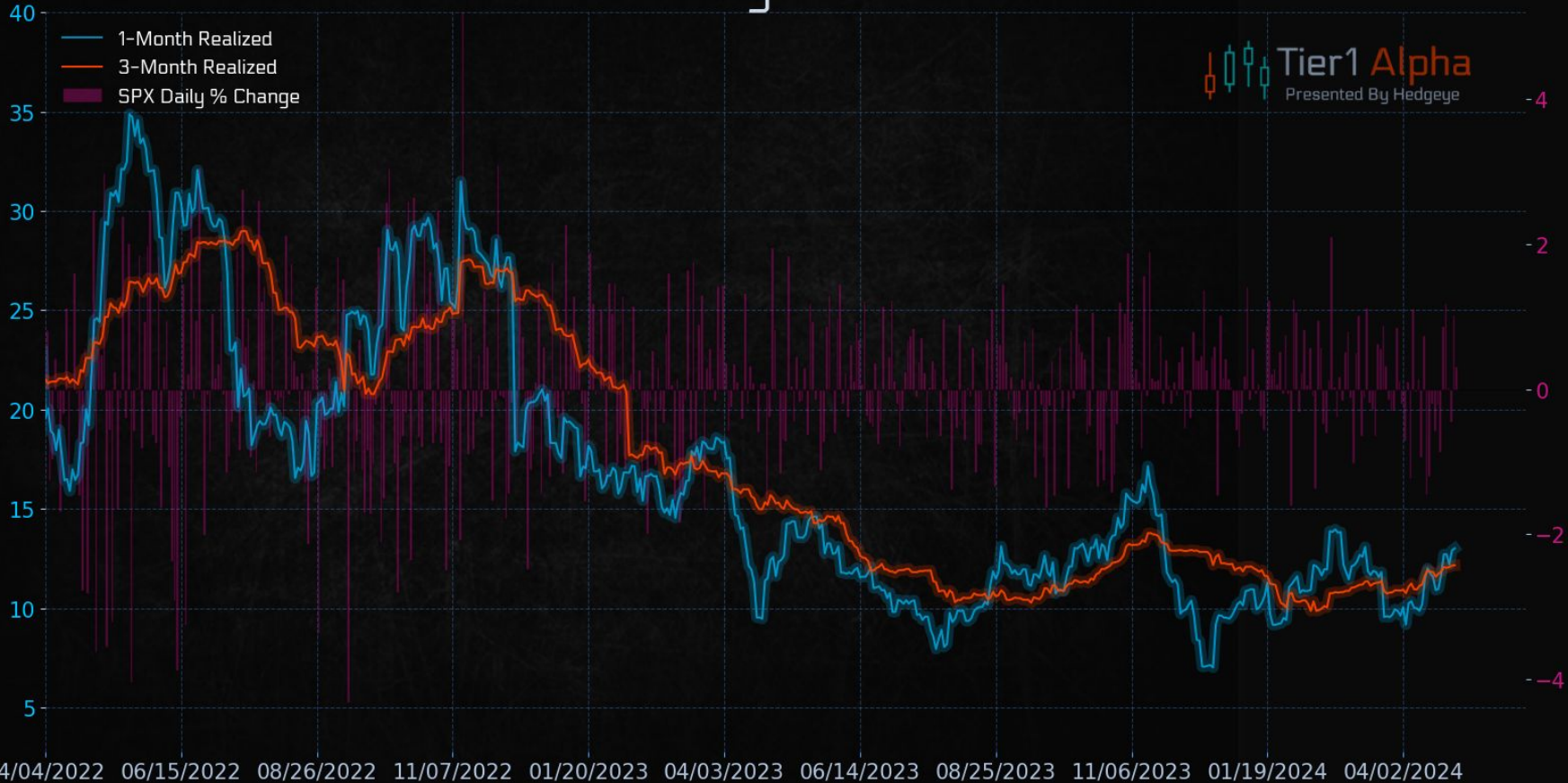


Date: 2024/04/29

--Downside Risk--

Source: Tier1Alpha.com

SPX Realized Volatility -- 1 Month vs 3 Month

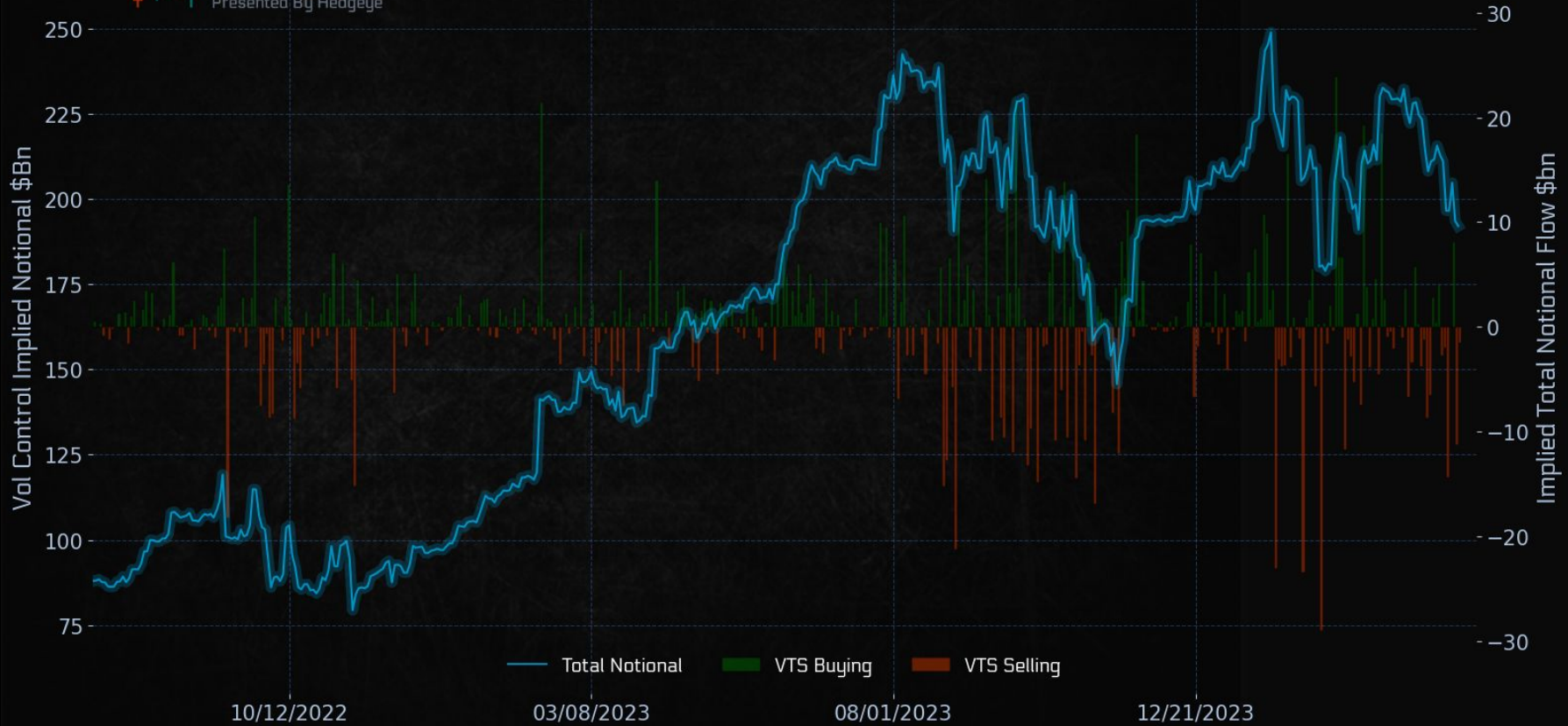


Tier1 Alpha
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Date: 2024/04/29

Source: Tier1Alpha.com

Vol Control Implied Notional Flows

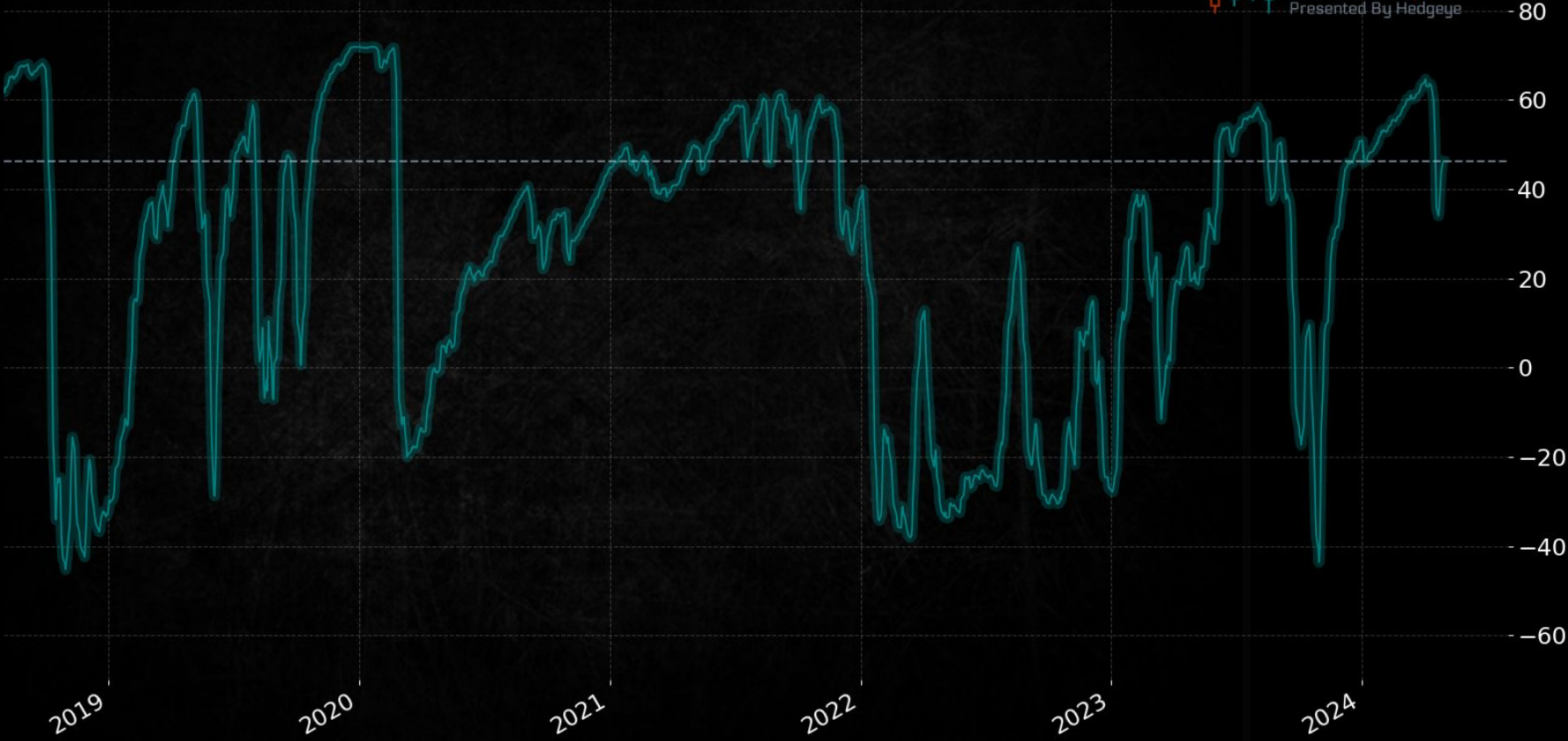


Date: 2024/04/29

Source: Tier1Alpha.com

CTA Positioning in US Equities

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Date: 2024/04/29

Source: Tier1Alpha.com

Systematic Positioning Index Vs. SPX

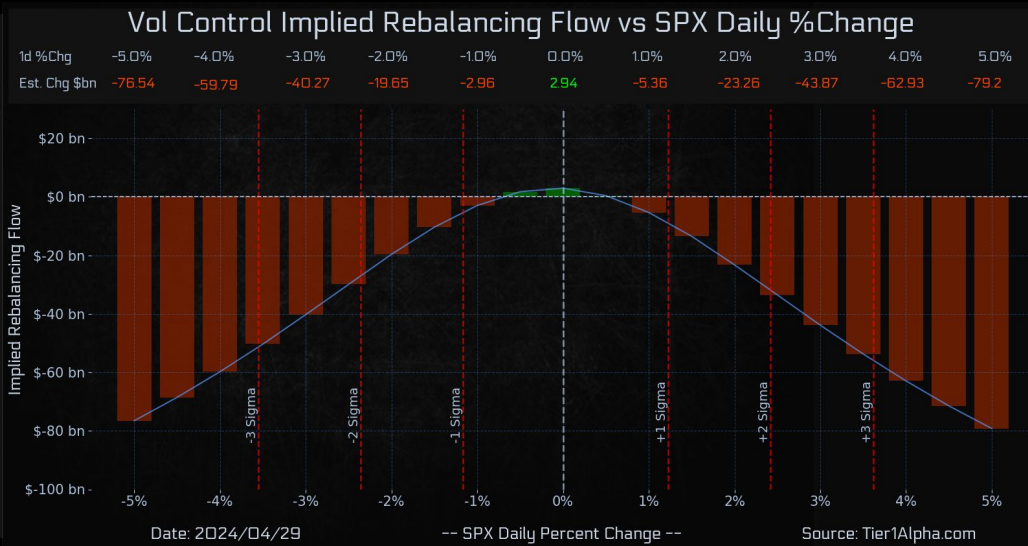


Date: 2024/04/29

Source: Tier1Alpha.com

SPX Realized Vol Data In Sample for 2024-04-30

Dropoff	1m Dates	1m Drop %	3m Dates	3m Drop %
T+1	2024-04-02	-0.7%	2024-01-31	-1.6%
T+2	2024-04-03	0.1%	2024-02-01	1.2%
T+3	2024-04-04	-1.2%	2024-02-02	1.1%
T+4	2024-04-05	1.1%	2024-02-05	-0.3%
T+5	2024-04-08	-0.0%	2024-02-06	0.2%
T+6	2024-04-09	0.1%	2024-02-07	0.8%
T+7	2024-04-10	-1.0%	2024-02-08	0.1%
T+8	2024-04-11	0.7%	2024-02-09	0.6%
T+9	2024-04-12	-1.5%	2024-02-12	-0.1%
T+10	2024-04-15	-1.2%	2024-02-13	-1.4%

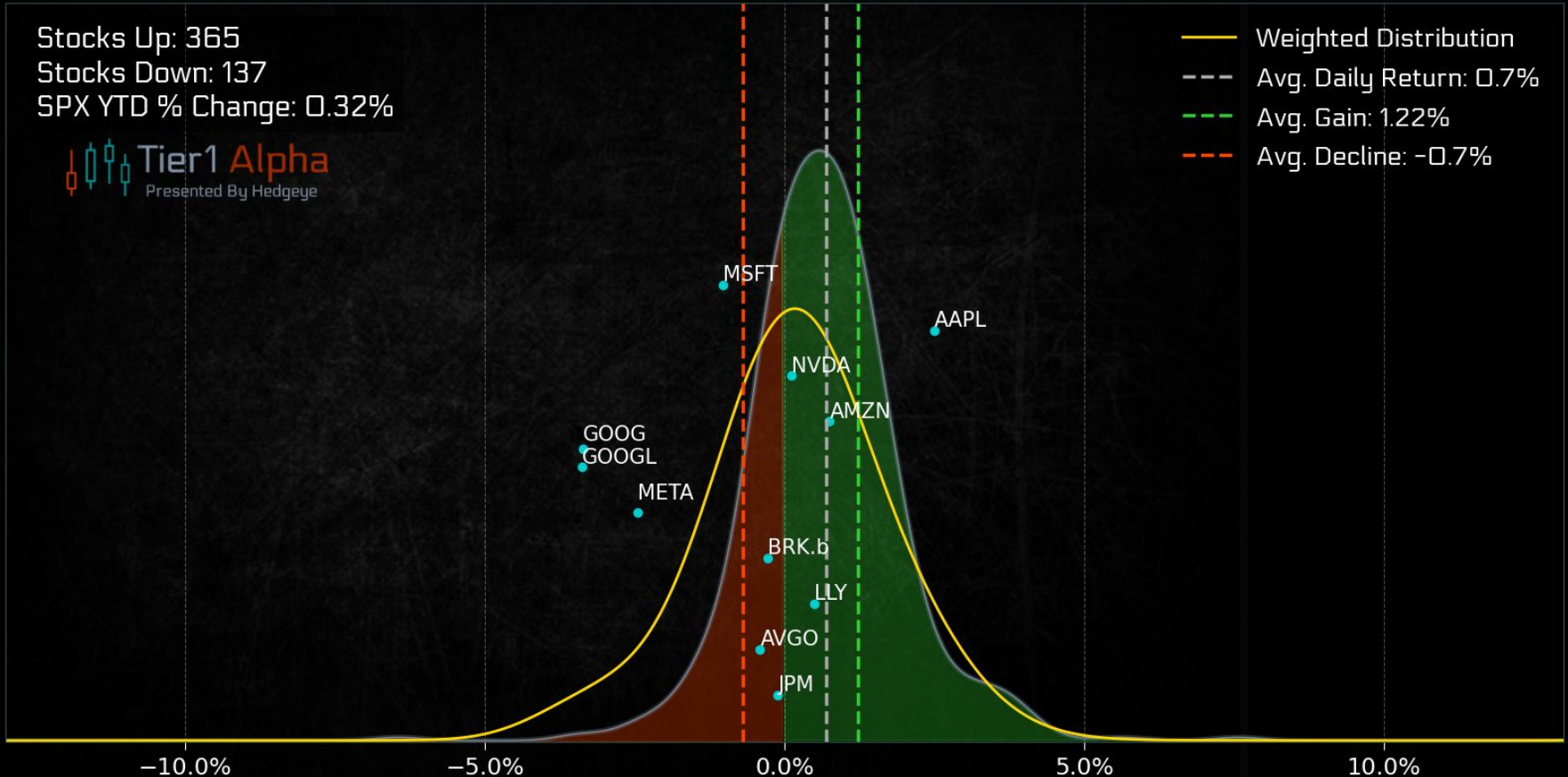


S&P 500 MBAD Indicator for 2024/04/29

Stocks Up: 365
Stocks Down: 137
SPX YTD % Change: 0.32%



- Weighted Distribution
- - - Avg. Daily Return: 0.7%
- - - Avg. Gain: 1.22%
- - - Avg. Decline: -0.7%

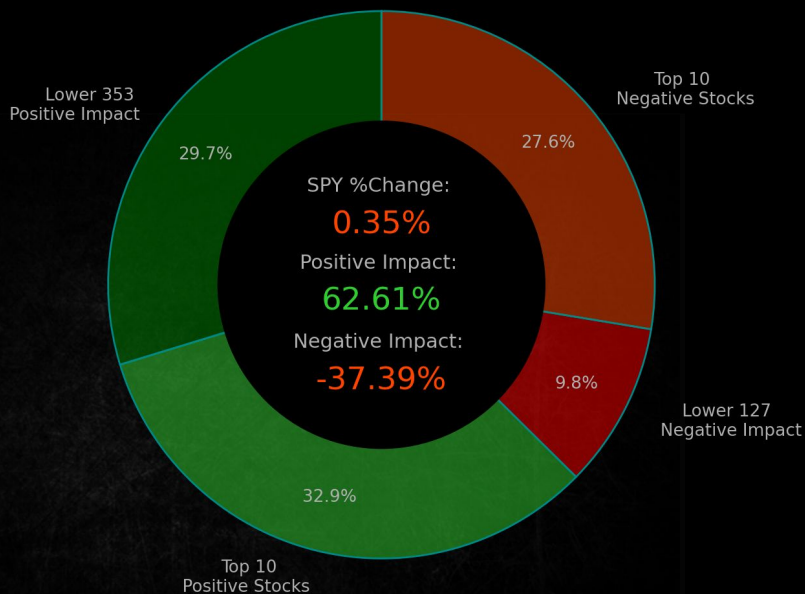


Date: 2024/04/29

--10% Return Distribution For SPX, Individual Constituents--

Source: IEX Cloud/ Tier1Alpha.com

SPX Constituents Relative Impact By Market Cap



Date: 2024/04/29

Source: Tier1Alpha.com

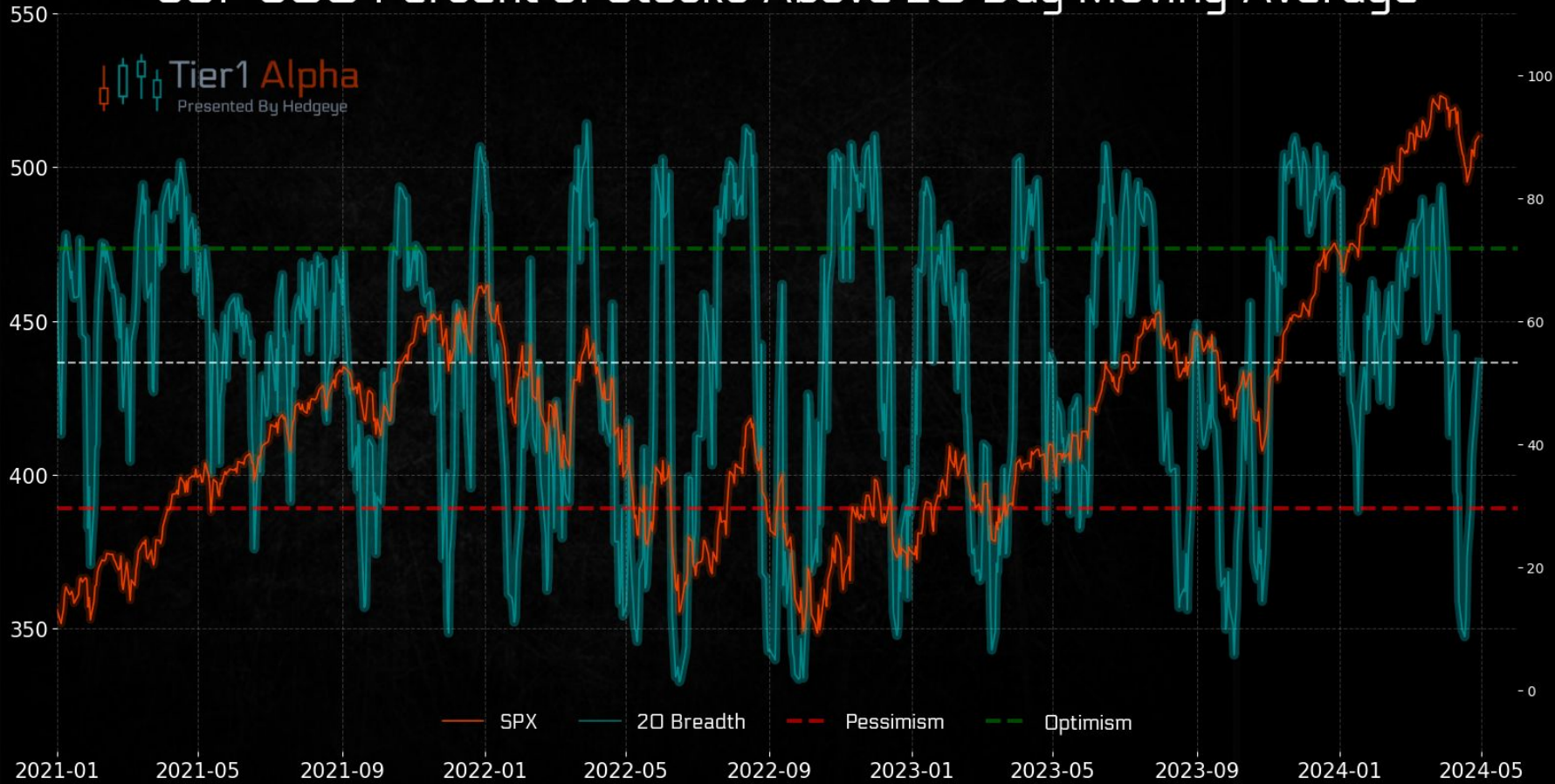
SPX Constituents Relative Impact By Market Cap

Largest Positive Impact

Largest Negative Impact

Top Contributor	Daily %Return	Positive Impact	% Weight	Top Detractor	Daily %Return.1	Negative Impact	% Weight.1
TSLA	15.3%	12.8%	0.99%	GOOGL	-3.4%	-6.2%	2.19%
AAPL	2.5%	12.1%	5.76%	MSFT	-1.0%	-6.0%	7.14%
AMZN	0.7%	2.4%	3.89%	META	-2.4%	-5.3%	2.62%
XOM	1.4%	1.3%	1.12%	GOOG	-3.3%	-5.2%	1.85%
AMD	1.8%	0.9%	0.6%	UNH	-1.3%	-1.2%	1.08%
QCOM	2.1%	0.8%	0.43%	MA	-1.2%	-0.9%	0.89%
BA	3.8%	0.7%	0.23%	V	-1.0%	-0.8%	1.02%
ABBV	1.2%	0.7%	0.69%	UBER	-2.4%	-0.7%	0.35%
CAT	1.9%	0.7%	0.43%	ACN	-1.6%	-0.6%	0.47%
AMGN	2.4%	0.7%	0.33%	MRK	-0.8%	-0.5%	0.75%

S&P 500 Percent of Stocks Above 20 Day Moving Average



Date: 2024/04/29

Source: IEX Cloud/ Tier1Alpha.com



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