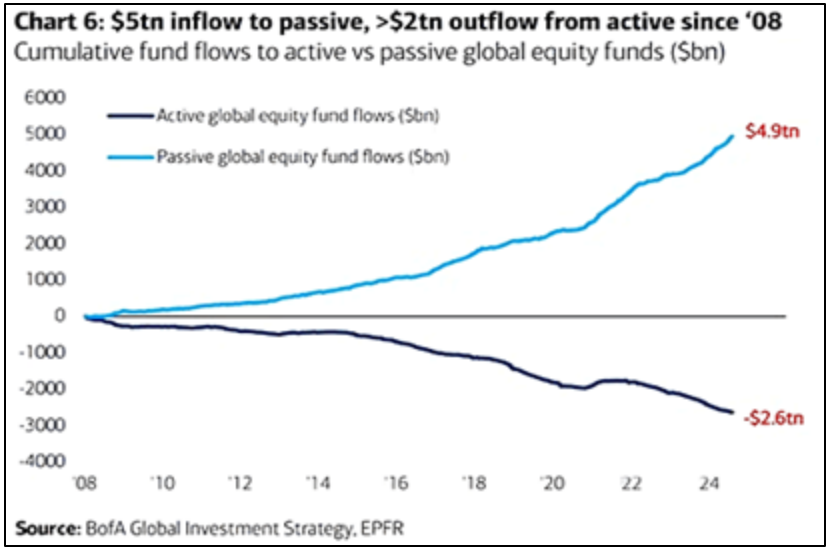
Tier1 Alpha
Market Research Tools

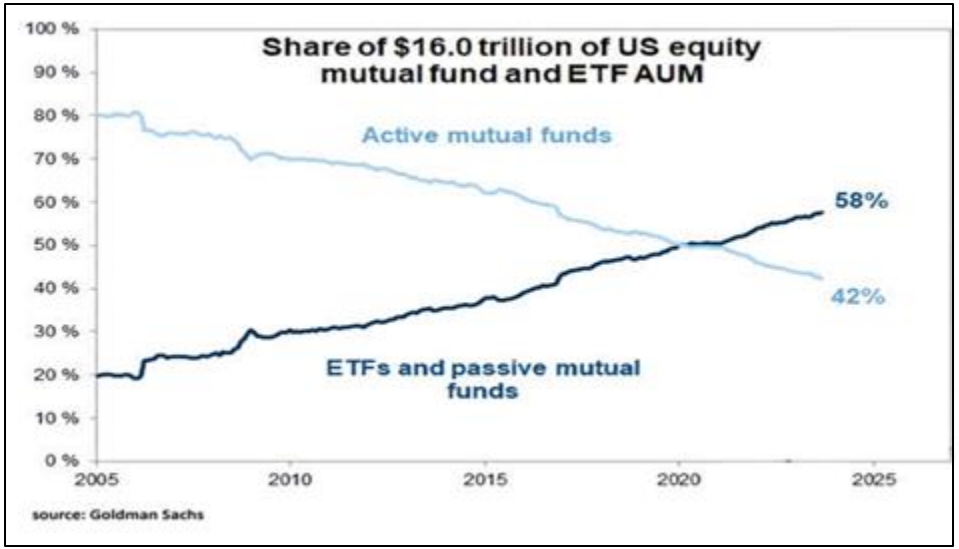
Harnessing The Power Of Market Structure Using NDX Options

A Fundamental Shift From Active To Passive

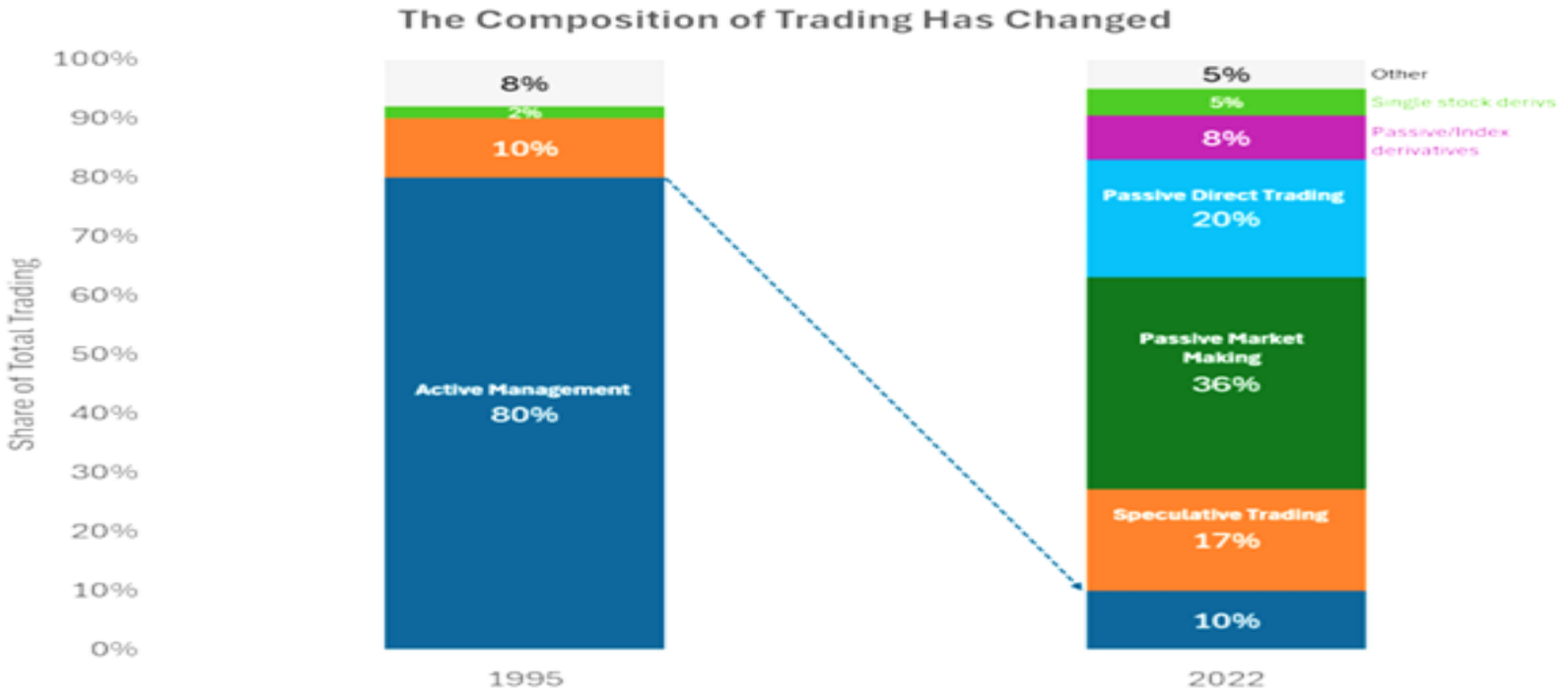
"I view the markets as fundamentally broken. Value is not a consideration for most of the investment money that's out there"

-David Einhorn, Greenlight Capital





Composition of Trading has Changed

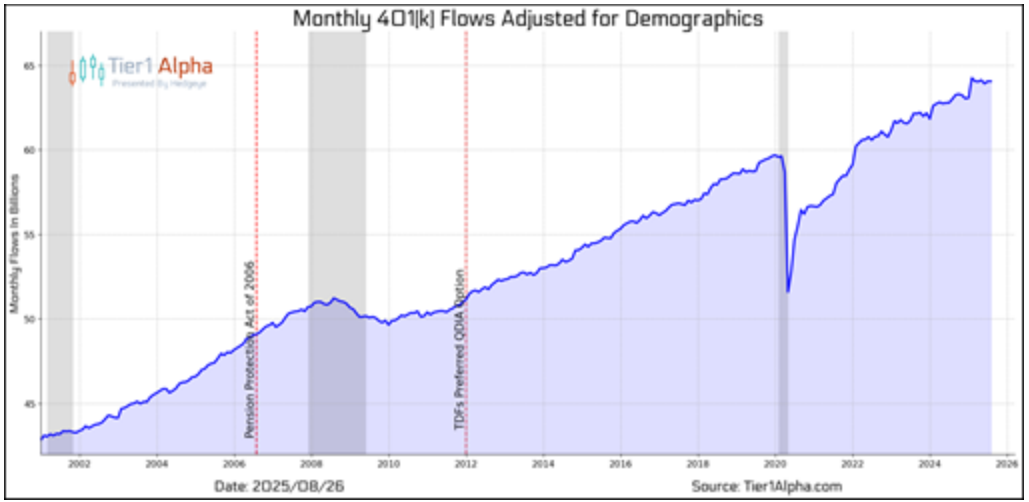


Source: Market Structure Edge, CBOE, Hagstrom 2013, Simplify calculations

Harnessing Market Structure: 401(k) Flows and Target Date Funds

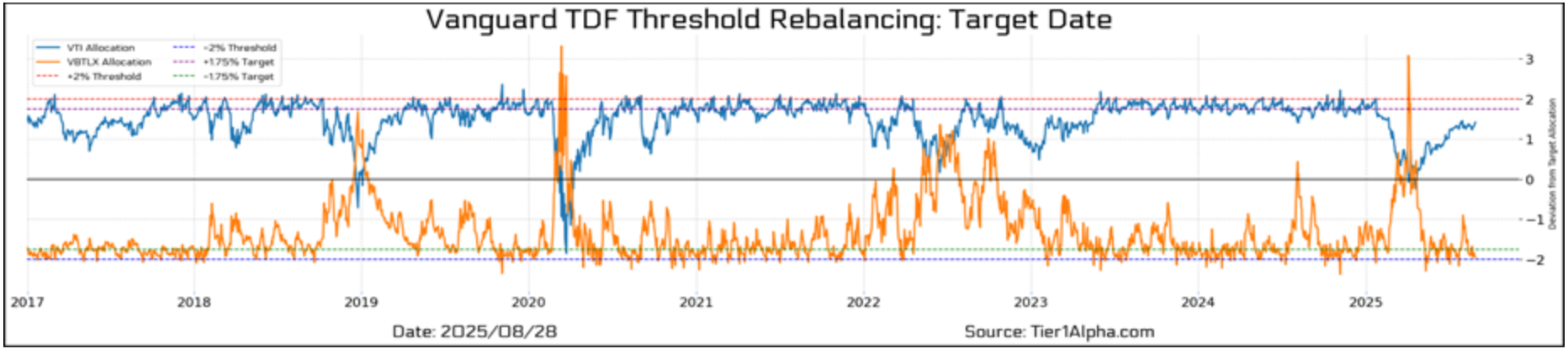
Have you ever wondered who's crazy enough to buy stocks at extreme valuations amid the backdrop of a global trade war?

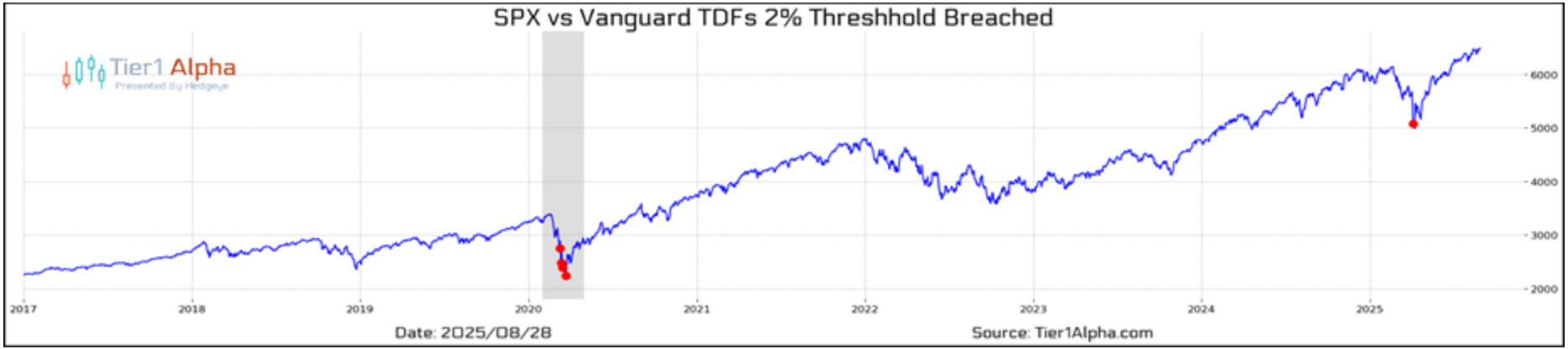
- 75% of defined contribution plans are funneled into Target Date Funds every month.
- A Target Date Fund (TDF) is an investment vehicle that automatically adjusts its asset allocation based on a specific future date, such as retirement, aiming to become more conservative over time.
- Since TDFs use a "Glide Path" to decide asset allocation, we can estimate how much 401(k) flows are funneled towards equities every month.
- TDFs and 401(k) flows directly connect employment levels with the equity and bond markets.



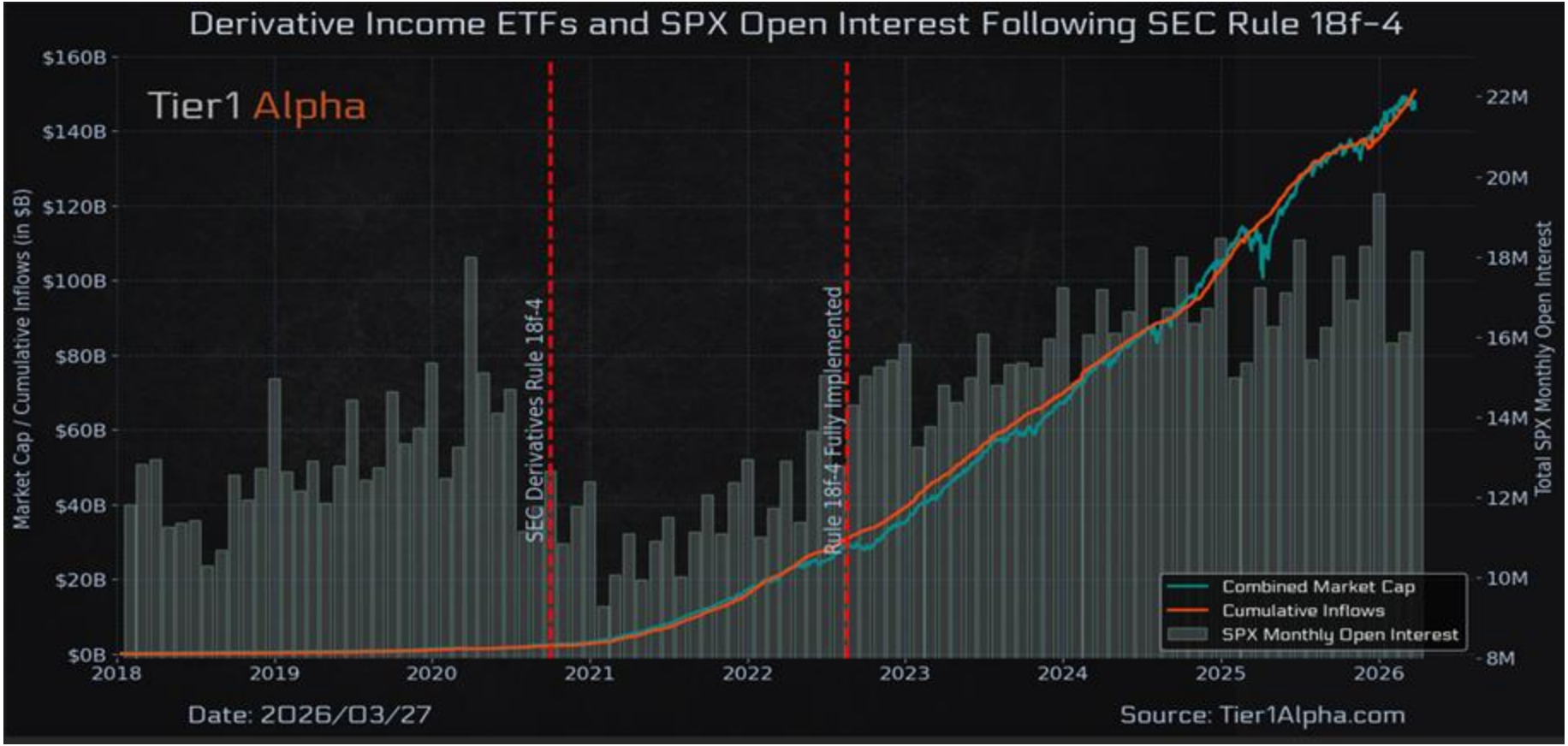
Well, if you're one of the 70 million Americans with a 401(k) plan, *YOU ARE!*

Vanguard TDF Rebalance Shock: April 2025





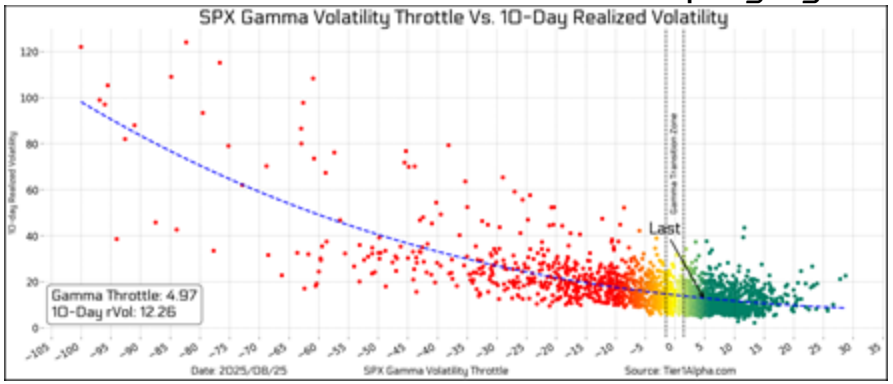
Growth of Derivative ETFs

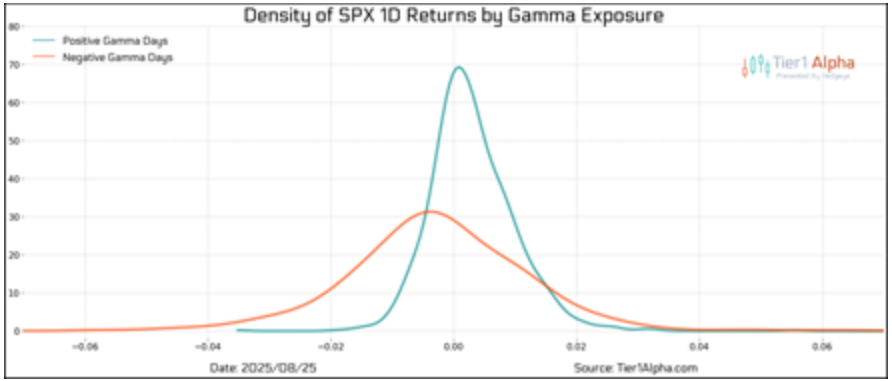


Growth of Leveraged ETFs

Harnessing Market Structure: Dealer Activity

Our Gamma Exposure models aim to track the estimated amount of flows generated by Market Makers deploying a Delta-Neutral Hedging Strategy.

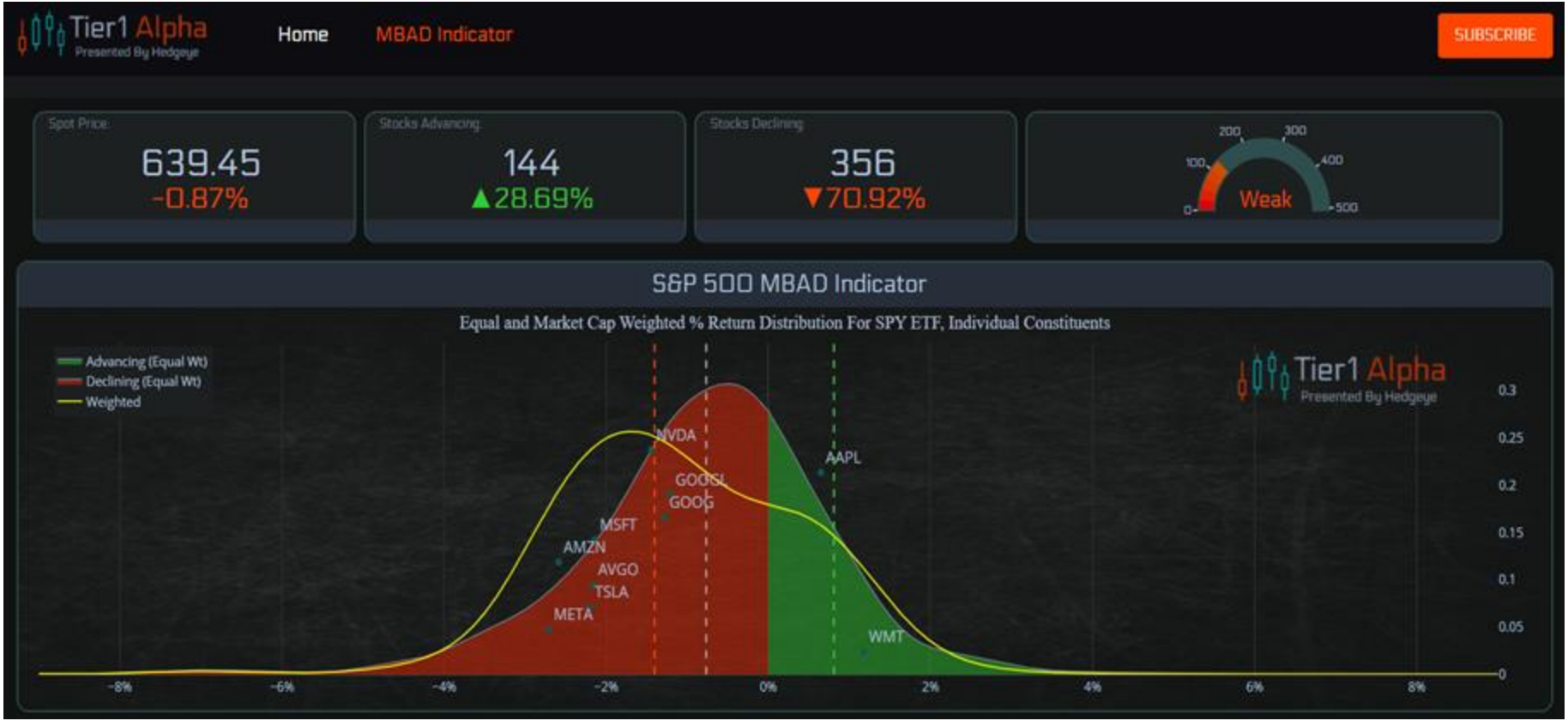




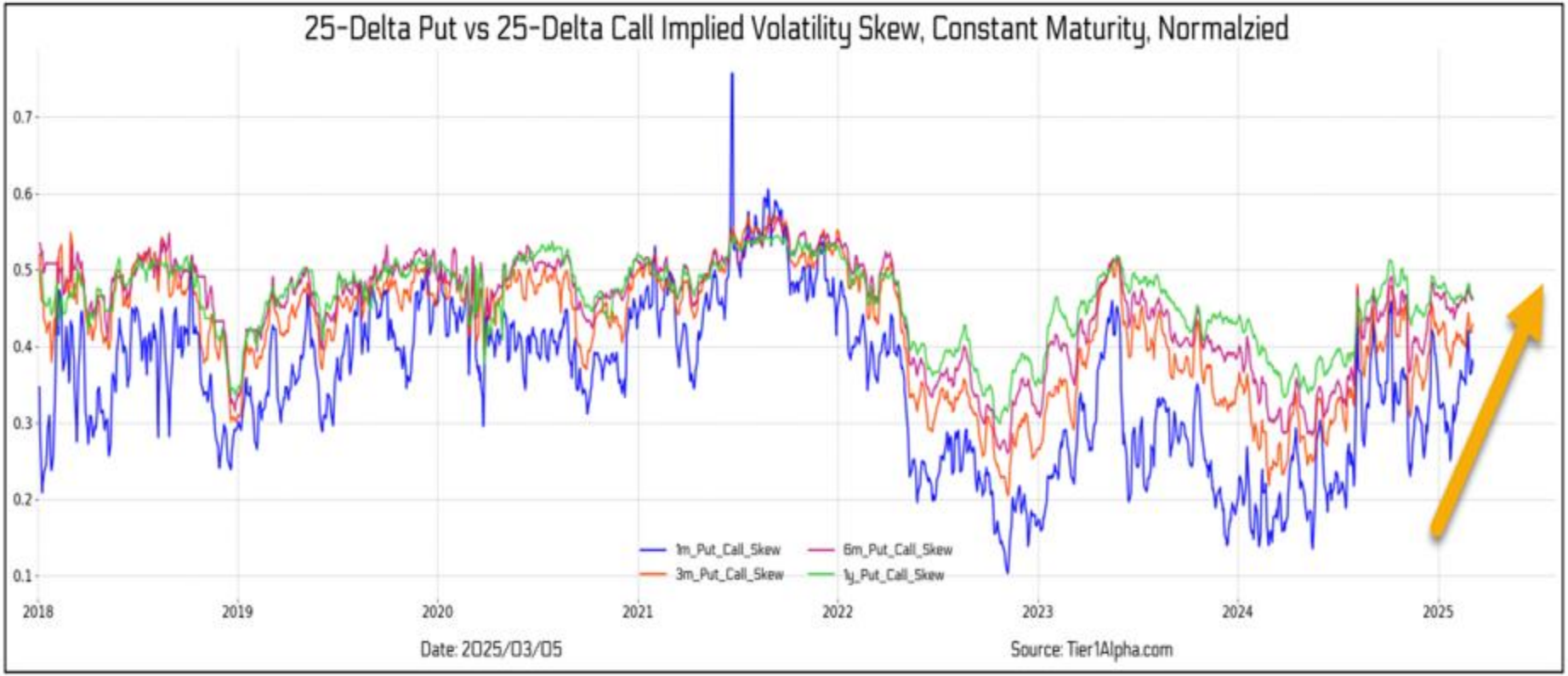
- When Options Dealers are ***Positive Gamma,*** markets tend to be **LESS volatile**, as dealers are forced to Buy the underlying asset when the market goes down and Sell the underlying asset when the market rises in order to maintain a delta-neutral position.
- This ***SUPPRESSES volatility*** as the flows are driven in the OPPOSITE direction of the cash index.

- When Options Dealers are ***Negative Gamma***, markets tend to be **MORE volatile**, as dealers are forced to Sell the underlying asset as the market falls and Buy the underlying asset when the market rises tin order maintain a delta-neutral position.
- This ***INCREASES volatility*** as the flows are driven in the SAME direction of the cash index.

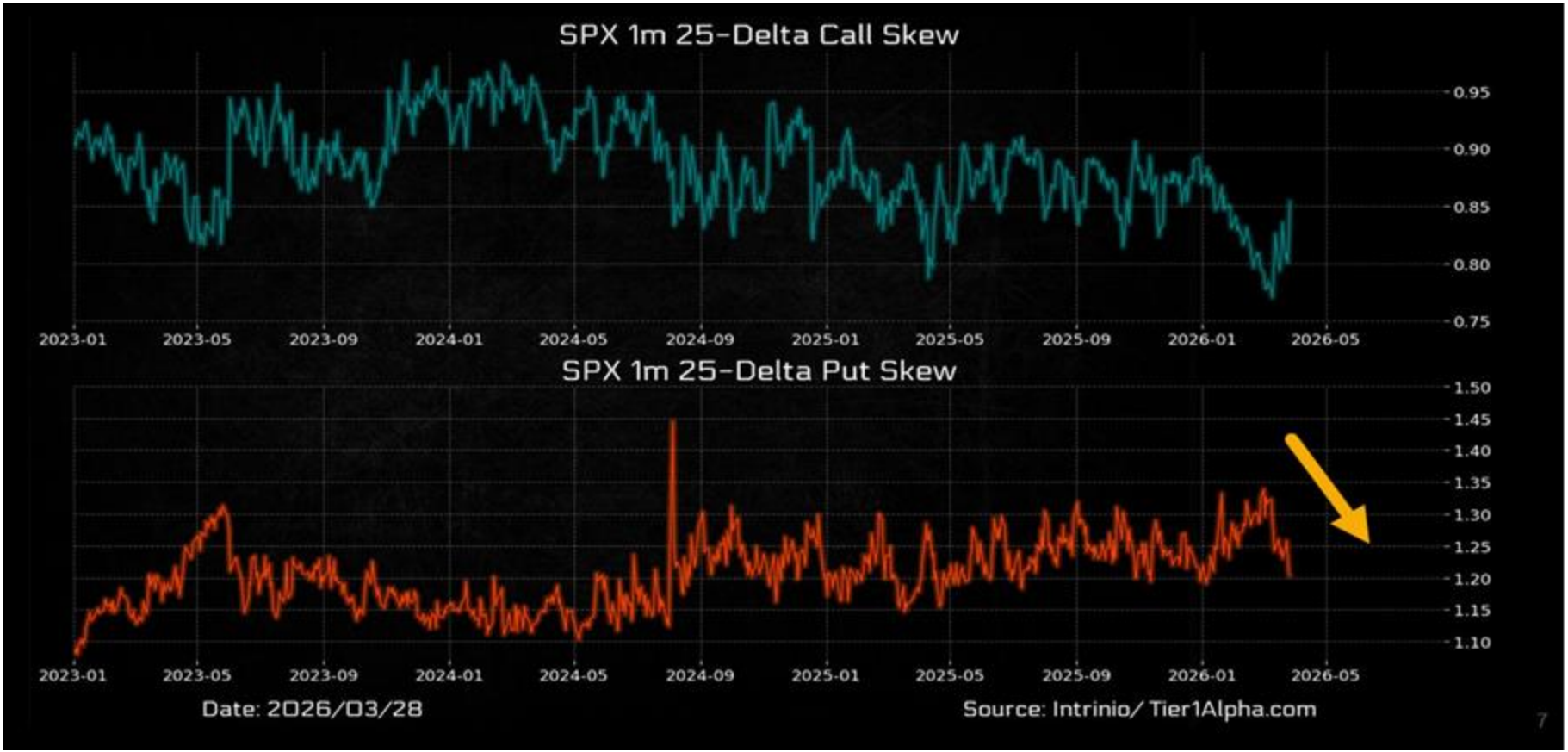
Dispersion an Embedded Characteristic of Mechanical Markets



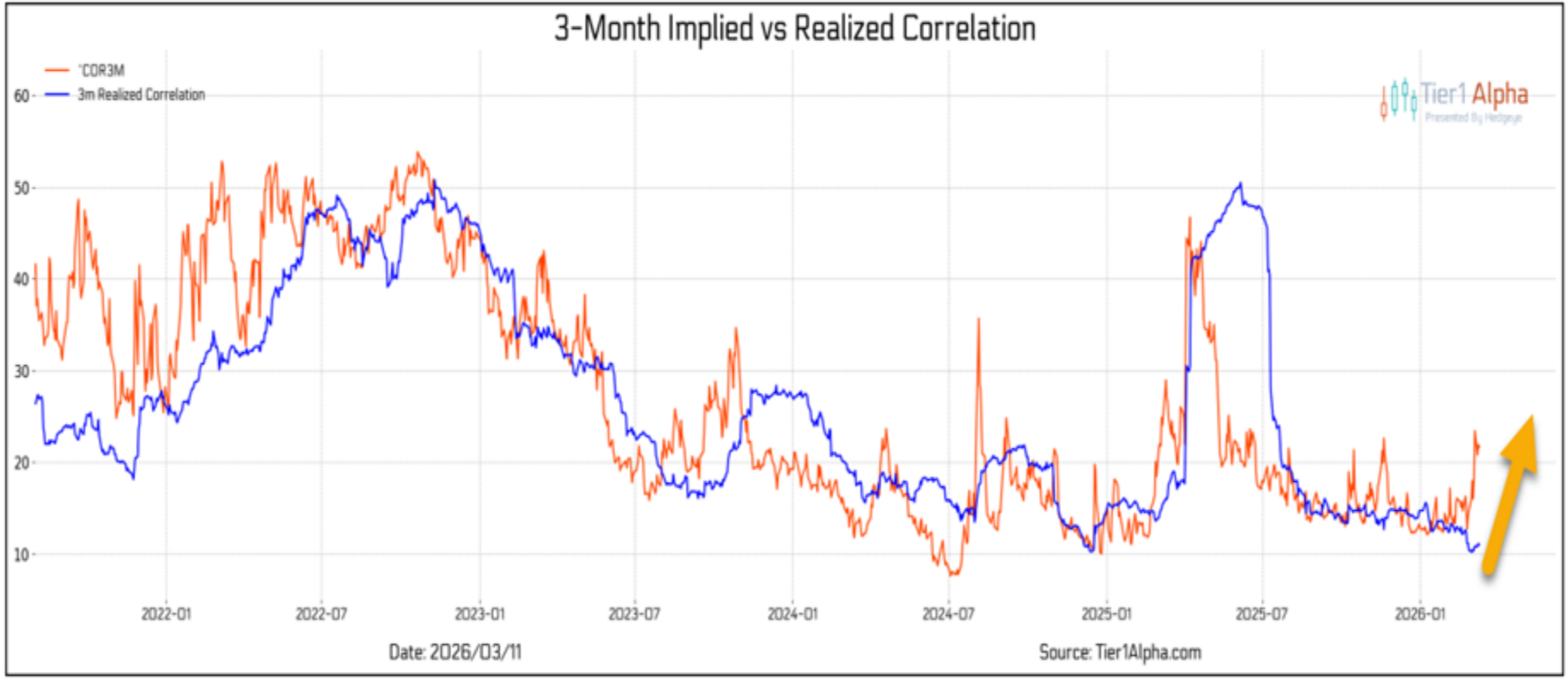
Volatility as a Transparency Tool (Skew March 5th 2026)



Volatility as a Transparency Tool (Skew March 30th 2026)

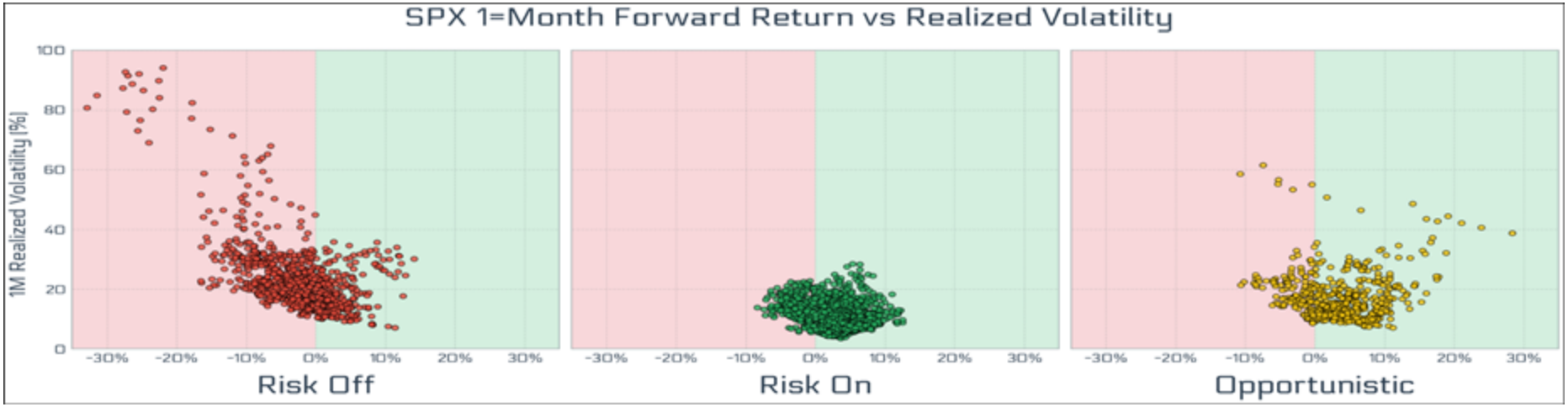


Volatility as a Transparency Tool – Implied Correlations



Harnessing Market Structure: The Power Behind Our Regime Model

Our regime model identifies three investable environments: Risk Off with high volatility and negative returns, Risk On with low volatility and positive trends, and Opportunistic with high volatility but asymmetric opportunities.



High Volatility, Negative Trend

Low Volatility, Positive Trend

High volatility, Asymmetric Returns