

Equity markets, equity risk, and equity trend

This blog follows-up from my TTU podcast. This blog may not be groundbreaking, but I enjoyed the TTU discussion, and I thought it worthwhile to frame my thoughts. The theme running through the discussion is risk. Before we construct a strategy, the first step is identifying the underlying risk.

Equity Markets (or index options and their impact on trend)

The first paper I want to discuss is from CFM and it gives a wonderful overview of recent changes in equity markets: <https://www.cfm.com/seven-degrees-of-market-structure/>

Here I am going to concentrate on a couple of observations the paper makes regarding structural changes in the S&P market:

1. The increase in S&P options trading
2. The dispersion effect in equities (DSPX Index at an all-time high)
3. “Buy the Dip” psychology: In recent years, it has become profitable to mean-revert equity indices

I want to explain how the three are tied together and how they affect short-term trend following.

Some background on option trading: a retail investor would normally trade against a market maker, like JP Morgan or Goldman. The market makers would buy (or) sell you the option and then hedge *their* position using futures trading. Their hedge needs to be adjusted only when the option delta changes significantly, i.e. when the gamma of the option is high.

We have seen an explosion in selling ATM 0DTE (zero days to expiry) options by retail (usually buying out of the money). These are very different to historic options buying & selling because 0DTE are **at the money** every day. When people used to trade 1-month options, they would trade over a month in multiple strikes across a wide range of values and by the time the options reached expiry, when gamma is high, most of the strikes would be out of the money or in the money, with very little gamma.

With 0DTE options, retail has been selling straddles at the money, and at expiry. If the price moves up, instantly, we see a large delta move and the market maker, being long gamma, starts hedging and selling the futures. This of course works countertrend and leads to a strong intraday mean reversion effect and reduced (realized) volatility of the index.

This “high at-the-money gamma” effect now explains lots of things we have observed:

- Why 1-day autocorrelation in equities has gone negative, hurting short term trend in equities¹. How material is it for trend? A drop of 1% in 1-day auto-correlation is worth a drop of roughly 0.15bp of Sharpe per market for a 1-day trend follower. For a 5d-20d trend follower, the weight on 1st day returns is lower, so it is a drop of 4bp per market (10bp-15bp at portfolio level) and it becomes immaterial for medium to slow trend followers.
- The buy-the-dip psychology: For a mean reverting process, buying the dip makes perfect sense and reinforces a short-term anti-trend behaviour of equity markets.
- The dispersion effect is quite subtle, and it is to do with how the dispersion is calculated:

Dispersion = $\text{SQRT}(\text{total variance implied from single stock options less VIX}^2)$.

Now, what happens if retail is selling **index** options? Both realized index vol and VIX levels get depressed but not necessarily single stock options, leading to a decline in implied correlation and increased implied, but not necessarily realized, correlations.

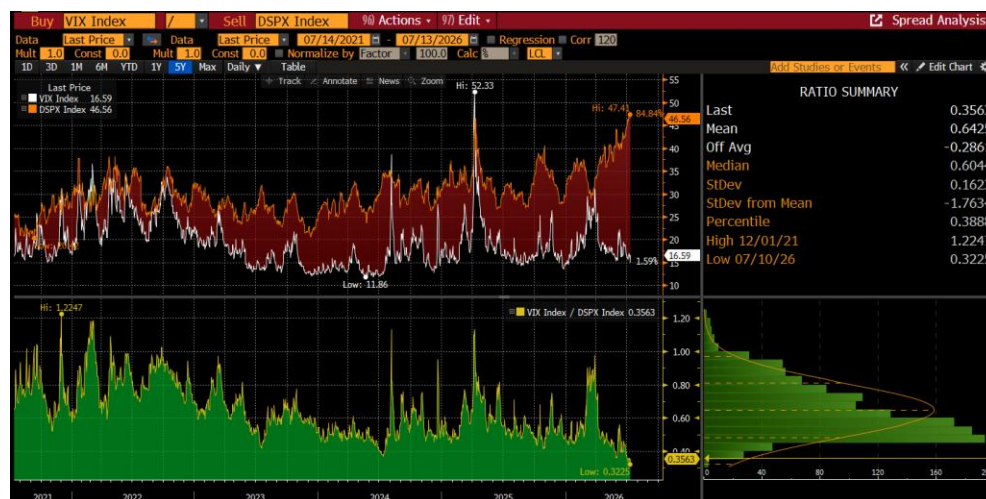


Figure 1: The VIX and DSPX indices. During stress, like “Freedom day” or “Iran War”, the VIX can explain as much implied variance as idiosyncratic (implied) risk. Currently, as of 14th July 2026, it explains a third of idiosyncratic (implied) risk.

¹ This is an alternative or a complementary explanation to the risk-adjusted tick size and dense vs sparse order book explanation proposed in <https://arxiv.org/pdf/2607.01550>.

Dispersion is not just driven by this pressure, we are seeing genuine realized dispersion globally, and not just in the S&P, so this is not necessarily the full story, but it is likely to be an important part of the puzzle.

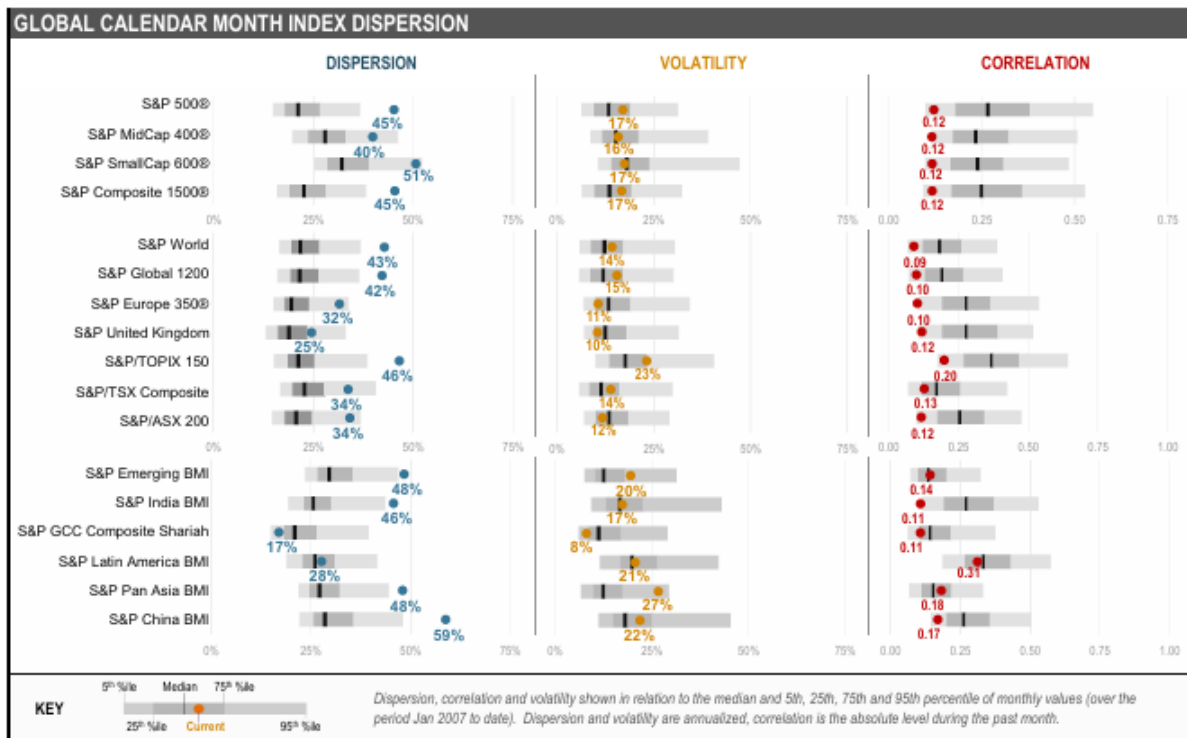


Figure 2: 1-month dispersion globally, source: [S&P dashboard-dispersion-volatility-correlation.pdf](#), as of end of June 2026

Equity Risk (or how much equity risk is there in the index and how much is idiosyncratic?)

Even with a high dispersion index, a beta to the index explains perhaps 25-30% of overall realized equity variance. We can explain additional covariance using industry specific indices and since the 70's, we can explain covariance across sectors using style. The Barra factors were introduced as risk models, explaining co-movements of “cheap” or “growth” stocks, using balance sheet attributes allowing us to identify co-movements of “value stocks” or “highly leveraged companies”

With industry factors and style factors, we are currently able to explain perhaps 50% of risk.

This approach has given rise to an academic cottage industry of finding factors explaining equity returns. As it happens, once published, most of these factors failed to be replicated (or make money) out of sample. It is perhaps due to “published alpha being arbitrated away” but perhaps it was never there. Academics have noticed that too and

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2961979 Jacobs & Müller (2017) and <https://onlinelibrary.wiley.com/doi/full/10.1111/jofi.13249> Jensen, Kelly, & Pedersen (2023) are excellent review papers examining the replication of these factors.

Narratives & Themes

More recently, we have seen a huge rise in theme-investing. The CFM blog describes the flows into SOXL, an ETF tracking the Philadelphia semi-conductors index.



Figure 3: TOP: AUM of the semi-conductors ETF SOXL over 5 years ending July 13th 2026. With the recent rise in AI and the shortage in chip fabrication, Semiconductors has become a “hot” theme, attracting capital. BOTTOM: Google Trend searches for Semiconductors over the 5 years ending July 13th 2026.

There are several thousand ETFs covering many themes: covering transient factors such as Covid, the Iran war or even the World Cup. As thematic investment became popular, banks began offering QIS theme baskets, which are even more customizable versions than ETFs.

Before we get too excited, the first question we should ask is how much “thematic-specific” risk is there? This is why I find the following paper (and presentation given in the Imperial College Quantitative Investment conference) so useful.

Thematic Investing as Missing Factors (Wai Lee)

This new paper https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5653050 looks at the construction of a theme-specific basket, orthogonal to existing country, industry or style. For example, if we are looking at semi-conductors, there is already an industry group (GICS 4530) whose volatility explains most of the semi-conductors’ hype.

Wai Lee looks at two examples of narrative ETFs and pointed out that indeed, even thematic ETFs are rarely orthogonal to existing market or industry factors. If you are looking for theme-specific exposure, orthogonal to industry exposure, you need to do more work.

What is interesting to me is that the extra orthogonal volatility Wai Lee can explain is around 5%, which is meaningful, but not excessive. From a practical perspective, it means creating a basket to cover a narrative should be difficult, which leads us to our next paper:

Narrative momentum (Ronnie Sadka et al.)

The basic idea behind the paper is using a distinct point-in-time dataset that has been collected in real time between 2012 and 2023.

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4912496

The authors have extracted 347 distinct narratives and constructed a trend indicator on each of the narratives. What they find is that whereas some narratives play out instantaneously, for slowly evolving narratives, investors tend to under-react initially, allowing a systematic harvesting of narrative-driven factor returns.

I really like this paper. It is well constructed and beautifully argued as a proof-of concept. I like the fact that the authors try to show how narrative trend is distinct from usual price trends.

To me, the main weakness, from a practical implication, is that calculating the beta of the stock's price reaction to a narrative is going to be tricky... after all, narrative only drives 5% of volatility... For some stocks (NVIDIA) the beta to the narrative will be higher but there is plenty of non-narrative volatility to throw your calibration process awry.

One big unknown is how social media and AI will affect narratives, their importance, and how narratives are “consumed” by equity traders.

AI has made news creation and news ingestion fundamentally different. Firstly, news are more personalized and targeted, making a “narrative” less an objective truth and more a subjective experience. Similarly, AI makes the automatic ingestion of narratives easier both by equity analysts and by quant traders.

Potentially, this could actually increase the importance of narratives in equity risk but equally, it may mean that harvesting narratives will become more competitive and will be arbitrated away. My feeling is that although beautifully done and very relevant for 2012-2023, it is less clear how well it will perform going forward and that a backtest is less relevant when the underlying mechanism itself of narrative creation & consumption is changing so rapidly.

Equity Trend

Trading Equity trend has become a more layered problem. Index futures provide the cleanest and most liquid exposure, but short-horizon signals are increasingly exposed to intraday option-driven mean-reversion. Sector and industry trends can add useful breadth, provided they are built to avoid simply re-levering market beta. Style and factor trends are economically plausible, but the independent risk is smaller, the construction is less stable, and implementation costs matter more.

Narrative and thematic trends are an exciting new extension, but also the hardest to harvest cleanly. To start with, if you are a trend follower used to a minimum of five years of a backtest, you will not be keen to allocate to narratives. Even if you do like narrative trends, most themes are at least partly repackaged industry, sector, or style exposure. The genuinely theme-specific risk factors appear meaningful but modest in size, and any edge based on investor under-reaction may be eroded as news ingestion becomes faster and more systematic.

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