S&P 500 Weekly Forecast 8/22

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Hey guys,

Things have gotten pretty hectic lately, so let's take a pause. Let's ramble. Where are we? How did we get here?

A recap:

In March, we started talking about how the tools of ancient geometers may contain the mystical key to understanding volatility, or something like that. Not even kidding. The idea was that we wanted to track three covariant volatility metrics, and, well, if you envision each of those numbers as the side of a triangle, then the internal angles describe their relationship with each other.

We hammered away at this for a *long* time. Sure, we wiggled some things around and re-imagined the relationship between the variables, but the idea was always the same—and the goal was to have a universal framework for understanding the internal relationship between an asset's volatility and its volatility-adjusted returns.

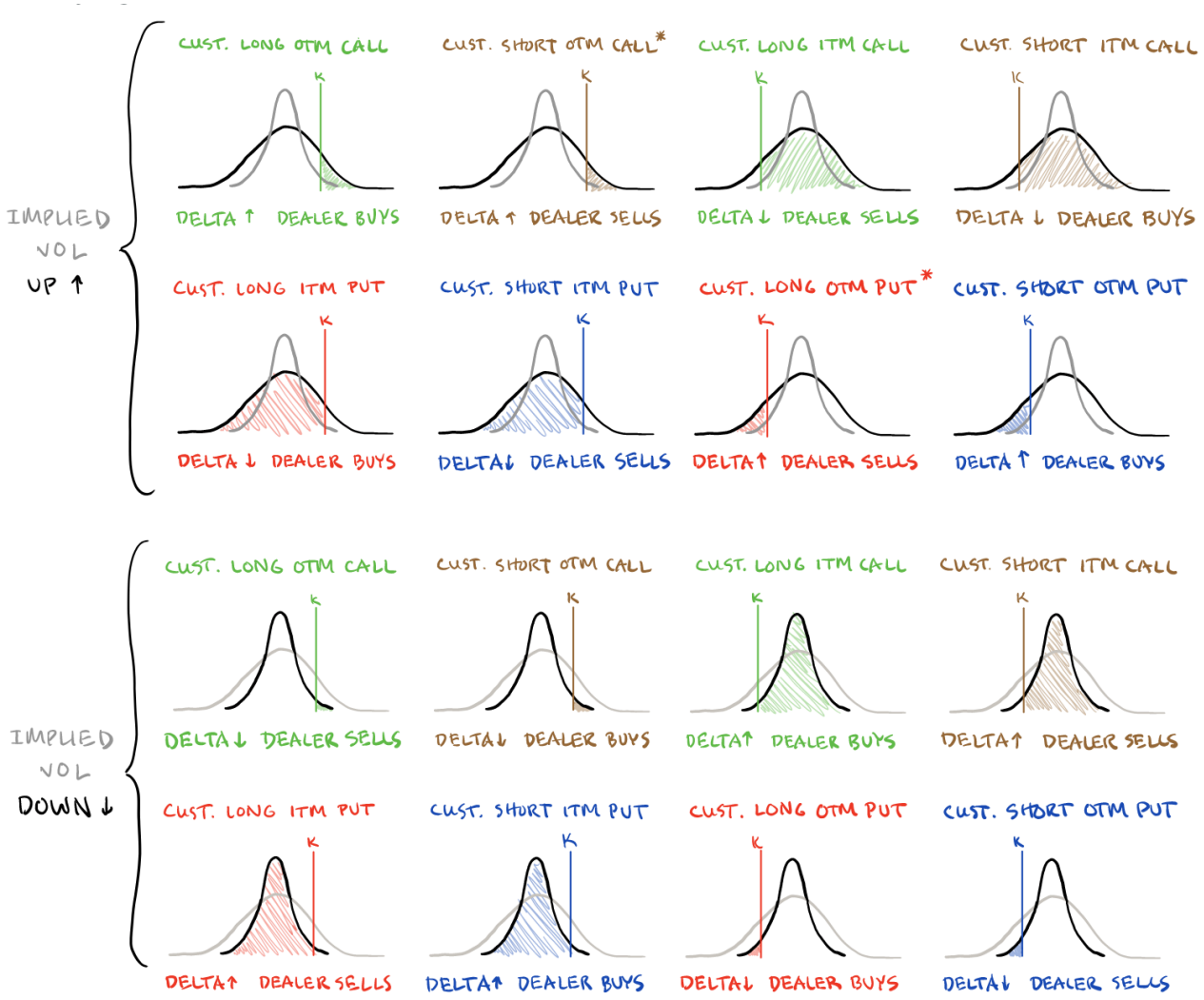
What does this really mean?

Think of it this way: If stock XYZ moved 1.00% on average every day for the past month, and its option-implied volatility projects that daily returns will continue to be 1.00%—what happens next? Is any of it predictable? Well, if you run a study like this, you'll probably find a whole lot of noise. *But* if you add another variable—the same-period *returns* in the stock—*now* you have something interesting: This is a new way to sub-divide events, and it allows you to figure out how XYZ responds to the *combination* of stock returns and volatility. E.g., does the stock tend to perform better or worse when volatility is rising or falling? What about when volatility is falling, but stock price is *also* falling?

You probably already understand that this *can* be done, but you may not understand *why* it's desirable. After all, why would there even *be* a necessary, consistent, or quantifiable relationship between the volatility of the asset and its returns? After all, there's nothing to *enforce* such a relationship! This isn't like SPX GEX!

And that's true. There's nothing to "enforce" it—but all the same, it happens *very naturally*.

You already know this:



The "vanna cheat sheet" isn't just about how dealers re-hedge deltas in response to changes in volatility—it's how *anyone* would need to change their stock exposure in relation to changes in volatility (in order to get the desired risk-return ratio). When you own an asset outright, you still have something very much resembling an option position, whether you know it or not. Do you plan on trimming the position if daily ranges tighten and it slowly drifts up? *You are short volatility.* If you were *flat* vol, you'd buy more stock as gently trends. Your position, whether you admit it or not, is akin to a short OTM put (bottom-right on the chart).

Think through a couple of these, but take the dealer out of the equation. (The dealer, after all, was just replicating your option position on your behalf!)

When you really get down to it, everyone is subsconsciously making volatility trades all the time, *especially* when they don't know that they are. Even a buy-and-hold strategy is long volatility into rising vol, and short volatility into falling vol ("flat vol" would mean selling stock into rising vol and buying stock into falling vol—which is what those "vol-targeting" funds do).

The composition of an asset's, or asset class's, investors and traders is, naturally, what determines the ongoing relationship between spot price and volatility, and we know, just from studying GEX, that the composition is predictable (have you heard of call overwriters?). Sure, positioning changes, investor composition and risk-tolerance change, but they do so slowly, and... if we dare say it... in a predictable

fashion! On any given day, the relationship between an asset price and its volatility will be driven by current positioning, *and the best way to suss out positioning is to view, in as much detail as possible, the ongoing, mutual relationship between spot and vol!*

We're yelling, but there is is nothing controversial about this. Any volatility trader would respond with some variation of, "Yes, and?"

Indeed, every time that you look at a chart of single-stock GEX, you are *already* internally weighing this information. "Stock price is up, drifting slowly upward, realized volatility decreasing with elevated GEX, and GEX historically high, and seems to have plateaued, suggesting that positioning is extended, and then it even started dropping today—perhaps the bullish trend is ending!" You're analyzing the co-movement of GEX, stock price, and volatility as a way to understand positioning!

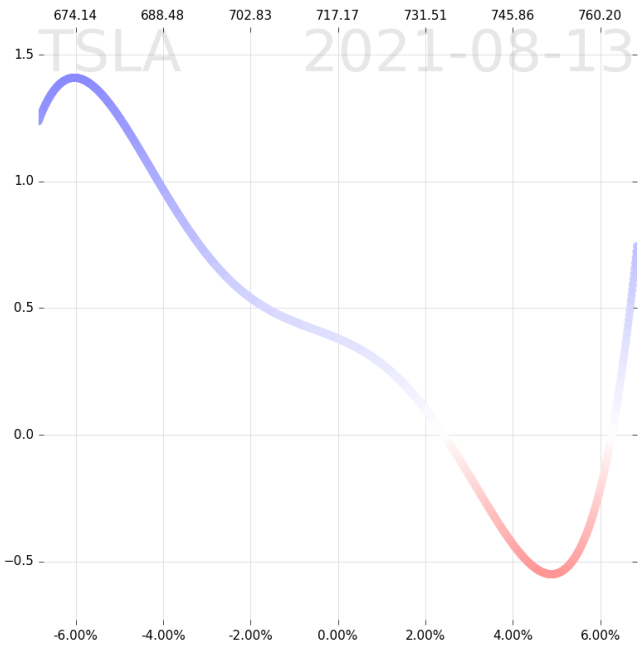
And then you would check for similar, repeating patterns in the stock's history. Is it a utility stock? Likely to be many call overwriters! Did it have poor returns in the past after a similar series of events, when gamma loosened its grip...? Short it!

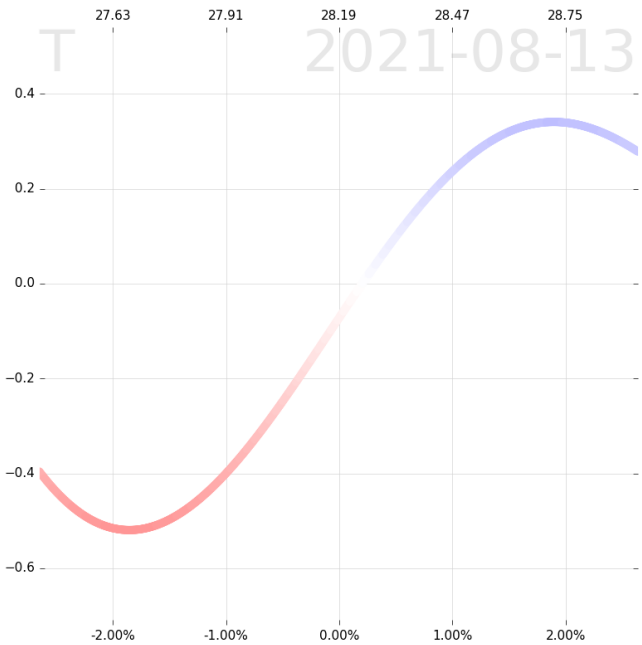
The desire, of course, is to remove oneself (and ones biases) from this weighting process, so as to address more scientifically a larger subset of the market, and—ideally—to be able to have distinct and worthwhile opinions on what stock/sector is likely to have relatively more support/resistance than another. And that's *why* we've been fussing about, trying to bolt on volatility, as another dimension, to GEX. (The vol triangle was a way of doing this. Zomma was a way of doing this. Zomma-to-IV-change was yet another. The goal was always the same!)

Last weekend, we said we *finally* had it working. And it's still looking good.

Hence...

...last weekend's *un-intuitive* assertion that TSLA was likely to have its dip bought, and T was not!





This assertion was based solely on the process that we've been working on. The inputs are perfectly normalized and consistent through time. This is, in essence, a process that "learns" positioning in a stock, and forecasts whether a given price level will be bullish or bearish. The "zomma curve," but smarter.

And what happened? Well, you can look at a chart for some indication, but so far, TSLA bounced, and T didn't—and that's interesting. What's more, TSLA started with an implied weekly move of around 4.40%, and exceeded it (-5.15%), for a -1.17 MAD weekly return; and T started with an implied move of 1.69% and returned -2.23%, for a -1.32 MAD weekly return. Long TSLA, short T actually worked!

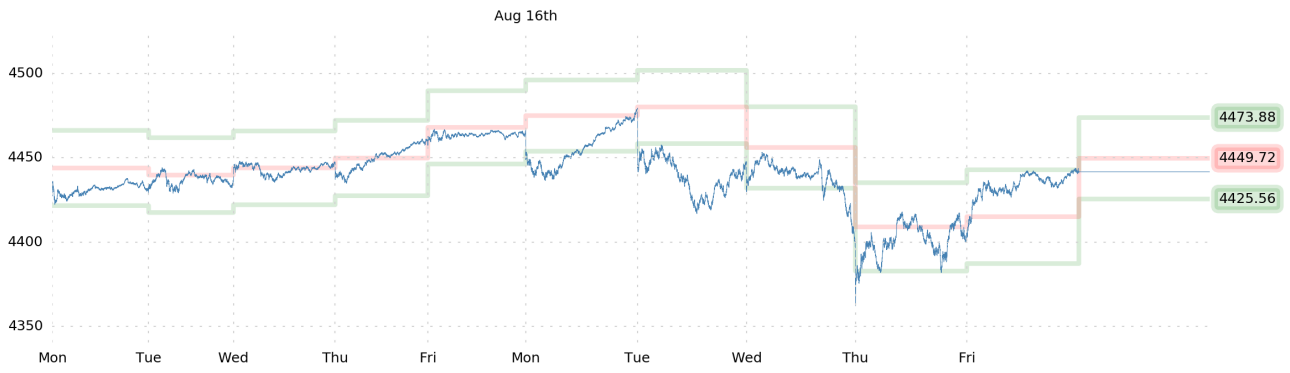
Anecdotal? Certainly. *Meaningless* in isolation—but if this is the type of edge that *could* be persistently harvested by knowing what the respective curves looks like... that's extremely useful. And so far, our backtests tell us that there's real meaning here. (And our brains say, "There ought to be!")

Does this make sense? In this context, do the last five months of Quixotic spiraling have at least some meaning?

It's our goal, through the end of this year, to clarify and present this data in a way that can be used effectively by you, dear reader. Because it's really, *really* good stuff.

And so, a question: Which would you rather see first? (1) A daily-updating "dashboard" of these plots and curves? Or (2) a bunch of raw data history. Certainly, both will become available soon, but which is more immediately interesting? Thank you all, as always, for your feedback, and your forbearance. It's been a rather hectic few months, but we're pleased with what we have in front of us.

(And by way of a forecast: We have a small short August VIX position, still, which was trimmed at EOD Friday. It went very nicely. Right now, our eyes are on NPD, which is being a bit scary—but ceteris paribus, it feels like a calm, bullish week ahead!)



Enjoy!

The SqueezeMetrics Team