S&P 500 Weekly Forecast 5/23

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Hey everyone,

Take a very deep breath. It's time for a trip down memory lane.

A.
About a year ago, we were in the process of bolting VEX onto GEX and mapping out S&P 500 liquidity as a function of combined gamma and vanna exposures (GEX+). We described vanna as "gamma's evil twin," since it takes over for GEX when implied volatility gets really high -- and ends up determining what the liquidity landscape looks like in extreme scenarios. That was really cool.

But those extreme scenarios are rare.

And if you've been here long enough, you remember that when we were first deriving VEX, we were optimistic that it could help us gain a directional edge. But it really didn't. Since then, our exploration of VGR and NPD (the "stock and flow" of SPX options) got us most of the way to where we wanted to be (both useful directional indicators) -- but it was a circuitous path, and it was messy.

B.
It was messy because all of the work that we did was focused on the index itself, and the index options (SPX) themselves. Any time that we tried to apply the same lessons, and methods, to single stocks, it didn't work out. The DDOI-based GEX+ just doesn't work in stocks, except in a few very rare cases. Any exploration into that space was a lot of time and money wasted.

And in so many words, that's why we're trying to simplify things again. That's why we're drawing triangles and thinking about "vol-tension." We want to be able to take the insights and successes of NPD and VGR at the index level, reverse-engineer them, and then apply the same method to single stocks. If there's one thing that we've found to be consistently true, it's that you don't need expensive data to get an edge, you just need an expensive *understanding*. You need to know *why* things work the way they do -- and then everything else falls into place.

C.
Two weekends ago, we sent you a data dump of our new SPX vol-tension model. The most notable characteristic of the model was that "zero" was what mattered most. When either SPOT, RV, or IV move toward zero, they contribute toward instability ("vol-of-vol") and index losses. And basically all this means is that when any "strategy" (long/short delta, gamma, or vega) is on the verge of losing money, that adds the risk of a lot of people simultaneously deciding to shift their positions. And when *all* of those "strategies'" PnLs are on the knife's edge *at the same time,* that's a powder keg.

In other words, *"zero" in the vol-tension model* is the "flip-point" between a calm market and a not-so-calm

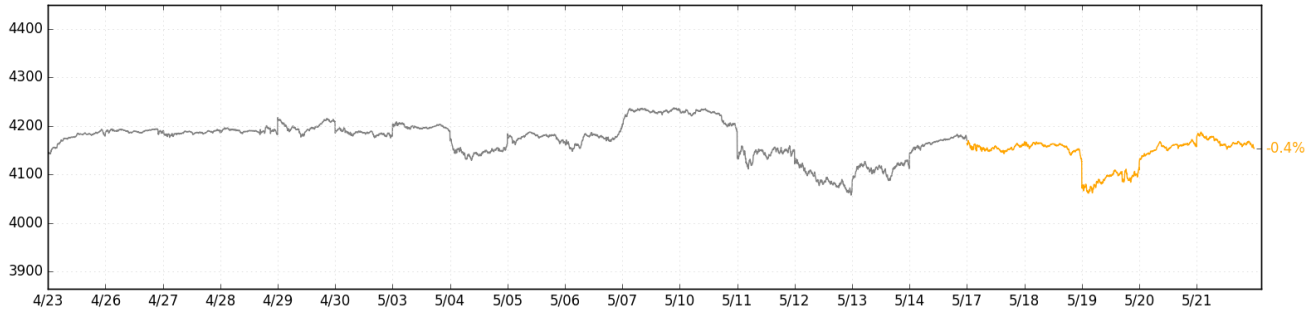
market.

Zero. Flip-point. *Where have we heard that before?*

But first:

1. T-5
2. T+5
3. Time is a flat circle

T-5
Fun one.

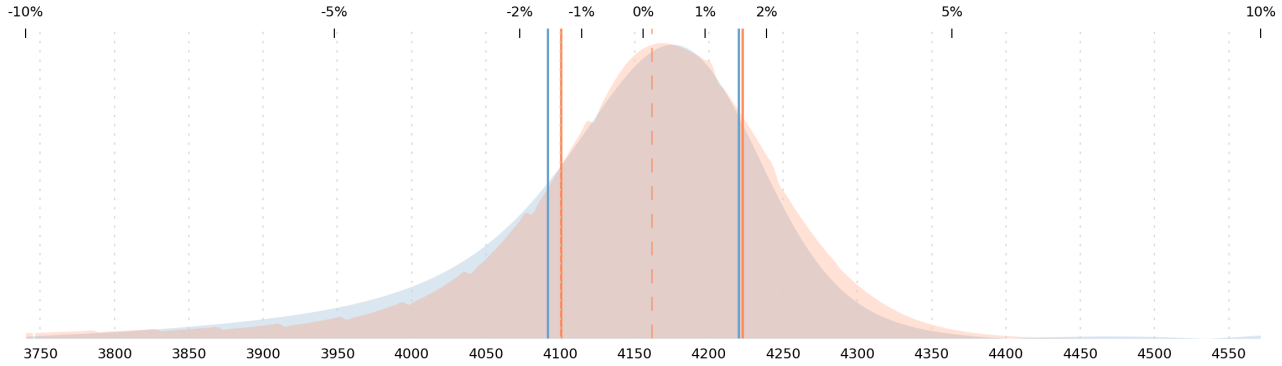


Came into Monday with short VIX, short SPX, dropped it on Wednesday morning, then legged into an iron fly for next Friday (5/28), centered at SPX 4150. Index proceeded to move toward that strike, and we continue to hold the fly. Pretty good!

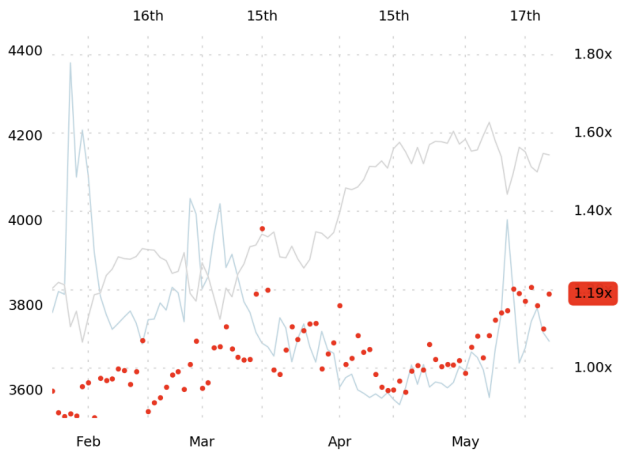
Only thing worth mentioning was that Wednesday was an interesting wildcard: Now that IVs are a bit lower and option OI has started to accumulate more predictably at nearby SPX strikes, gamma is gradually becoming more fleshed out, and you see a more colorful GEX+ heatmap. On Wednesday, the amount of puts (short to dealer) struck near spot meant that there was quite a bit of vol-of-vol potential (steep-sloping GIV curve), and that a quick drop to SPX 4000 was quite possible (though as we mentioned on Wednesday morning, it almost certainly would *not* have gone further).

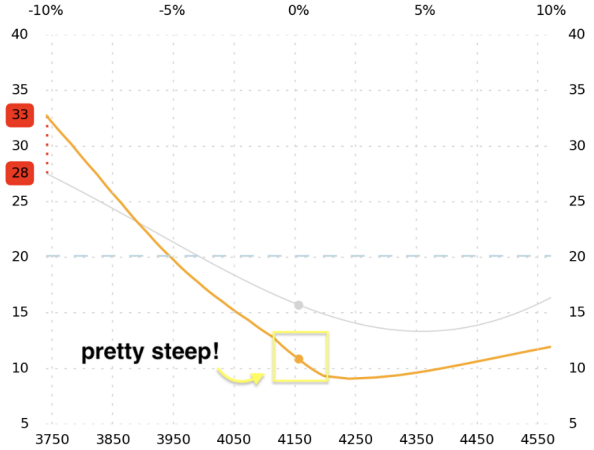
That worked out in a pretty boring way, with SPX climbing the steep GIV curve the same way it went down -- and leaving the index right where it started the week.

T+5
We're expecting similar energy this coming week: "Choppy indecision." And that's why we're holding an iron fly. You might find this odd, given that the 1-week probability density tells us that we don't have an edge in selling options.



But recall that we spent a whole month, recently, avoiding short gamma, when short gamma was the only thing that was actually paying. Our suspicion, then, is that even though the current GEX+ liquidity situation has high vol-of-vol, it won't translate into the strong directional trend that would ruin our fly position.





Sure, GEX+ isn't very high ($500mm), and the slope of GIV is actually pretty steep right here -- but the vol-of-vol is really very local. The GIV curve is flatter and more boring elsewhere (gets steeper under 3950, but probably not relevant now). What's more, NPD and VGR are not exciting, which suggests that customer positioning is pretty safe. And if we want to refer to our nascent "vol-tension" model, we find ourselves in a very boring place. Similar to last weekend, really.

We think that adds up to "choppy indecision" -- and we are positioned accordingly.

Extended Nerd Note below.

Time is a flat circle

> In other words, *"zero" in the vol-tension model is the "flip-point" between a calm market and a not-so-calm market.*

So.

For the past two weeks, we've been silently pondering our vol-tension model, which measures what trade, between delta, gamma, and vega, is winning and losing the most over the last month. Remember, we're trying to build a unified framework here, that can be applied to both SPX and single stocks (like we said above). The hypothesis is, quite simply, that the winning trade will probably keep winning until it goes too far,

after which the winning trade simply can't win any more (this is the intuition that we've gathered from trading, in any case). "Too far" is what we want to quantify, so we know, more or less, what "vol regime" we're in, and what combination of trades we could put on to take advantage of the inherent tension between these three elements.

But every time we ran a test, the same question arose: How can we really say that a trade is "winning" or "losing" *if there's no one there to win or lose?* And by that we mean, if there's no one actually *taking* the hypothetical long gamma or long vega trade in earnest, then does it really mean anything to be tracking how much money the trade has made? Sure, maybe in SPX -- where the level of engagement in options and volatility is extremely high -- maybe here there will be a constant, slow-moving cast of characters buying and selling gamma and vega, with everyone structurally long delta. And maybe this is why the vol-tension data for SPX seems to show a consistent signal around "zero."

But what about in a stock where flows and positioning aren't quite so enormous, predictable, and slow-moving? We ran a test in AAPL, and while it *did* show an apparent directional edge (be long AAPL when long gamma has been losing a lot of money, but not *too much* money), there was no clear clustering around "zero." The story was the same for a number of other stocks.

And so we thought, y'know, maybe we need to weight the vol-tension model by option open interest, to really capture how much, e.g., "long gamma" has *really* won or lost. After all, weighting gamma by OI and tracking that through time would give a pretty good idea of how much gamma positioning exists, and where, and how it's actually performed in aggregate. What's more, if you simply adhered to a silly convention that all calls are "long gamma" and all puts are "short gamma," you'd be able to essentially track the delta component at the same time, and...

...oh.

That's what GEX already does. Like, the original GEX. The dumb GEX. The thing we've been talking about publicly since 2016, and the GEX that many of you still use to inform your S&P 500 price and vol forecasts, despite our many attempts to add complexity to the model and pitch it to you as "improved."

See, when aggregate option positioning, as measured by *gamma * OI*, is right in the middle of call land and put land, GEX is zero. Simple. When a stock rockets up (long gamma wins, long delta wins), GEX rockets up. When it stalls (long delta and long gamma lose momentum), GEX moves back toward zero. And as you've heard a thousand times from us (and from hordes of sell-side researchers and knockoff service providers), zero is the "flip point" in the S&P 500, where things get more volatile. *Zero.*

Could it be that the SPOT and RV (delta and gamma) components of our proposed vol-tension model are actually just another way of looking at GEX? And that in a big, robust market like SPX, with lots of calls and lots of puts, and lots of long-gamma and short-gamma players, our vol-tension model sees the most volatility commencing when RV and SPOT are both around zero -- which is in *pretty much the exact same place that GEX would see it?* Where the balance of "long" call and "short" put gamma adds up to... *zero?*

You may have questions at this point. Some doubts. Some concerns about the "precision" of either the "vol-tension" model, or GEX -- or both. But hey, if you don't suspend disbelief for a few moments every now and then, you won't make any progress at all. So let's press on, and ask the one question that we think comes naturally:

If the SPOT (delta) and RV (gamma) components of the vol-tension model are described reasonably well by GEX already, then what about the IV (vega) component?

In other words, how do we *add* the IV component to GEX? How do we take GEX and add another dimension to it, to include the impact of IVs? Not the impact of IVs on option *deltas* (VEX already did that), but the impact of IVs on GEX *itself.*

We have an answer. It's a simple, one-word answer. And by golly we'll be excited if it works. Because if it does -- *if our vague hunch is correct* -- it means we've had a very powerful edge in single stocks and ETFs that we've been overlooking for years.

We'll let you know next Monday.

The SqueezeMetrics Team