## S&P 500 Weekly Forecast 7/26

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Hey guys,

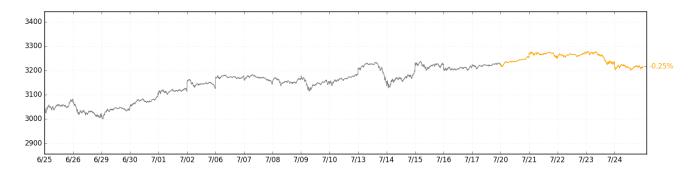
Shorter note this time.

It was an easy week for trading, but a tough week for research. So we're just going to throw in an extra word about vanna to keep the juices flowing and mention what you should be seeing from us by next week at this time.

- 1. What was
- 2. What will be
- 3. Vanna again

## What was

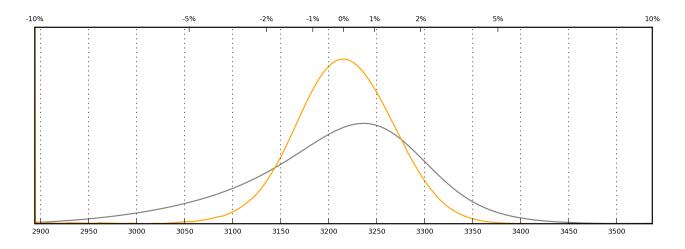
Quiet week. Profitable week for iron flies. Index lands down **-0.25%** on a weekly basis. No gap on Monday, so it was an easy decision to center the Friday-expiring flies at 3220. SPX settling at 3215 made for a lot of premium collected. Anecdotally, this is why you trade a fly rather than a condor. Over time, the couple of very fortuitous settlement prices that you end up getting will do a *lot* for your PnL. An iron condor takes away this possibility entirely, and reduces your reward-to-risk in an objectively bad way.



Nor did our decision to halve our short VXX (constant maturity VIX futures) exposure cause any regret. We thought, and still think, that this is a better market to short implied volatility against *realized* volatility rather than implied against implied (big topic of the last three notes now). This seems to be working out. Realized average 5-day move now 0.69%, compared to the ~0.90% that we've been predicting during the week.

## What will be

We're still betting on a flattish index. <u>DIX</u> has continued its mean-reversion and no longer predicts crazy gains. <u>NYSE Composite</u> printed sub-4mm volume, which is below average. VIX is pretty much exactly where it was last weekend. GEX+ is still about \$500mm, and GIV is around 11 (implying 0.53% MAD). The GEX-implied 1-week distribution looks like the orange probability density below. Still very divergent from the market's 1-week expectations (gray).



That this all makes us believe that the "crazy gains" phase is officially over is interesting, because it means that all those long calls struck above "Big Tech" stocks are probably just going to sit there and slowly lose value, and/or be liquidated. We'd wonder if this situation lends itself to a sort of spread trade: Selling ATM calls on NDX and selling ATM puts on SPX.

Partly, this is informed by the belief that SPX liquidity is good and that its vol is overpriced, and partly, this is informed by the belief that Big Tech calls losing value will cause option dealers to gradually sell NDX exposure, keeping a lid on the upside. The astute reader, however, will acknowledge that the gamma of those calls could encourage another leg up, if NDX prices regain their highs -- so this is a situation where you want to add a long call leg to protect from a low-probability parabolic move.

So if you want to "mix it up," maybe bring your iron fly call legs into NDX territory and leave the put legs in SPX. (We talk a big game, but no, we're not going to bother doing this. Too much work.)

## Vanna again

But speaking of vanna effects, let's re-frame the role of long OTM calls, because it's really very much the same as the "usual" thing that we see with OTM puts in the S&P 500. An OTM call's delta increases as IVs increase, just as an OTM put's delta increases as IVs increase.

In the case of the puts, this exacerbates corrections, because IVs tend to rise as a stock falls, and the presence of OTM puts will *cause* additional selling (by dealers) into that correction. In the case of OTM calls, though, IVs tend not to increase nearly as much into rallies, so the OTM put feedback loop between rising IV and vanna-induced selling doesn't work quite the same. The gamma of the calls always ends up mattering more (lower IVs means more gamma).

This is why you never see something like SPX or NDX actually "crashing up" (TSLA can, of course, because it's basically a penny stock). But the latent impact of bought OTM call vanna ("gamma's evil twin") is still going to be there, and it's going to make it harder for the underlying to go up. For every moment that the gamma isn't continuing the rally, the vanna will be quietly stifling it, and if IVs are relatively high (and are likely to mean-revert, absent other forces), then there will be latent selling pressure.

The inverse of this is that when IVs are high and there are a bunch of long OTM puts, the likelihood that IV will fall increases the probability that the underlying will be under *buying* pressure (recall that this is why bought puts cause corrections, but not crashes -- to cause crashes, you want an increase in IV to trigger option dealers' selling).

So again, there's a relationship between IVs and underlyings that's actually *enforced* by options, and the relationship can be quantified (if you recall, it's what made us think that short TSLA was a good idea this week). And if you believe that IVs are fundamentally more predictable than stock prices, then you also believe that, in some cases, the predictability of IVs *cause* the underlying to act more predictably -- by way of vanna. And with all of the talk this week (following a Goldman note) about how equity option volume is at unprecedented highs, well, this is more important than ever.

But enough about that for now. Next weekend, we're going to be talking about the Probability Page, which is the second out of three daily chart PDFs that we're deriving from the S&P 500 GEX+ data to give context to the market every morning (so far, you've only seen the Risk Report). A number of you have been waiting more or less patiently for this one, so we'll be happy to finally get it out there. Because by golly there's a lot of other work to do!

Thank you all for your patience and input, and have a wonderful week.

The SqueezeMetrics Team