S&P 500 Weekly Forecast 9/27

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Hey guys,

A few weeks ago, we started talking about deriving a sentiment indicator from index option data. We though we'd be able to get a sense of "support" and "momentum" based on the relationship between implied and realized volatilities. We even came up with a cute name for what we were hoping to find (SUMO, short for "support-momentum"). Well, it didn't pan out (maybe we shouldn't give things cute names if they're just going to die).

Last weekend, though, *there was a ray of hope*. Instead of volatilities, we started looking at net put deltas, the amount bought and sold, in SPX options. What we found was that...

> when a lot of puts are being bought (-), subsequent 1-week market returns are excellent. When a lot of puts are being sold (+), what little data we have suggests that subsequent 1-week market returns are also excellent (but only when it's a ton of long delta). There's a persistent story, though, across all timeframes, that when net SPX put deltas are around $0 (or a little bit positive), that's when things aren't looking good.

So it actually turned out that when a lot of puts are being bought (negative delta), that's indicative of *support*, and when a lot of puts are being sold (positive delta), that's somewhat indicative of *momentum*. And when there's neither support nor momentum, that's when market returns are worst, on the 1-day, 1-week, and 1-month timeframe.

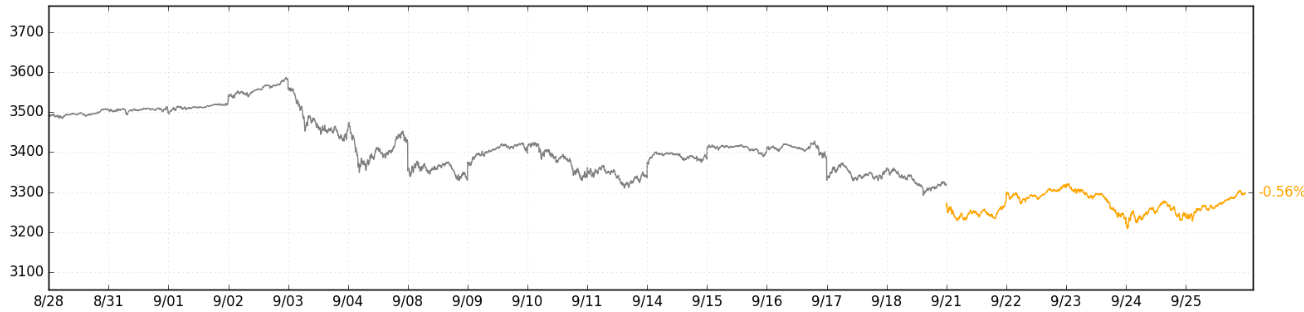
Long live SUMO.

1. Then
2. Now
3. SUMO Redux

Then
As we said on Tuesday morning...

> Friday iron fly is centered at 3300 (between the Friday close and the gap-down open). Beautiful spike in IVs got you a lot of premium for your trouble. Lots of people seemed to expect yesterday to turn into some sustained downside volatility (post-OpEx volatility seems to be something people bet on now) . As a reminder, we're still quite a distance from the zero-gamma/vanna region. This is why we keep betting on mean-reversion.

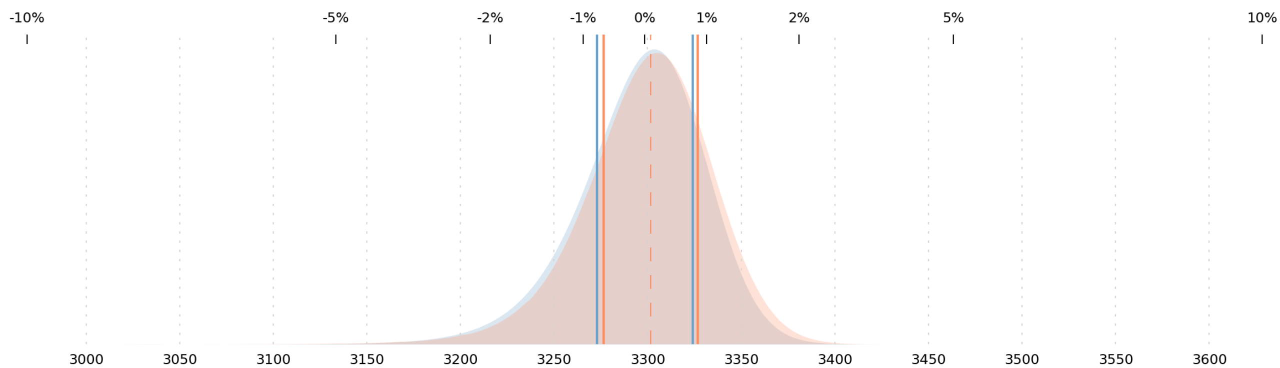
And indeed, mean-reversion ruled the week, as the index wagged its way to a 3298 close on Friday -- nearly a full profit on our 100-wide, 3300-centered iron fly. One of the reasons that we like iron flies (and talk about them incessantly) is that they offer the opportunity for this kind of full profit opportunity. It only happens occasionally (and only by virtue of luck), but it's a big deal when it does.

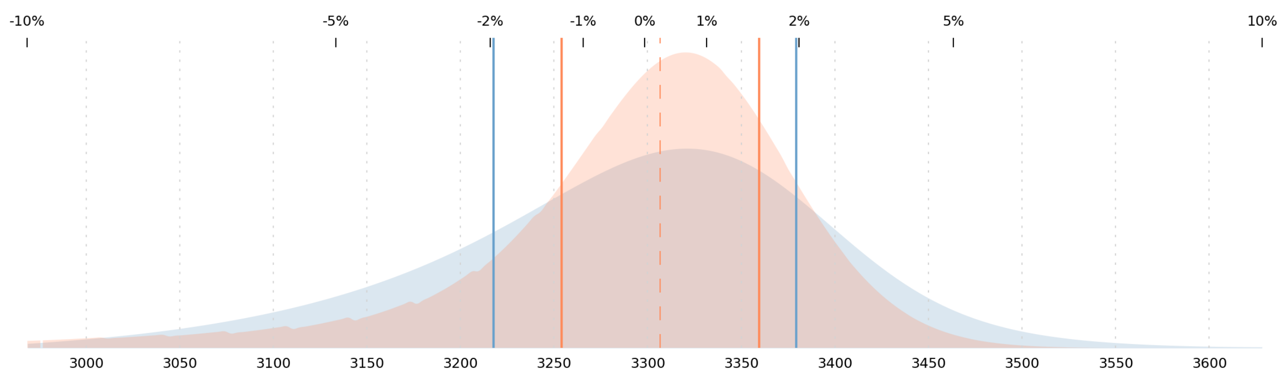


Index down **0.56%** on the week. We won't bother reproducing last weekend's probability densities. Ours was again, "more correct" than the probability density implied by the market. Hopefully you benefited from that.

Now

If you consult the Probability Page, you'll find that our GEX-derived 1-day probability density (top, orange) is pretty much identical to the market's, and that our 1-week density (bottom, orange) isn't *too* dramatically different, but obviously presents an edge.



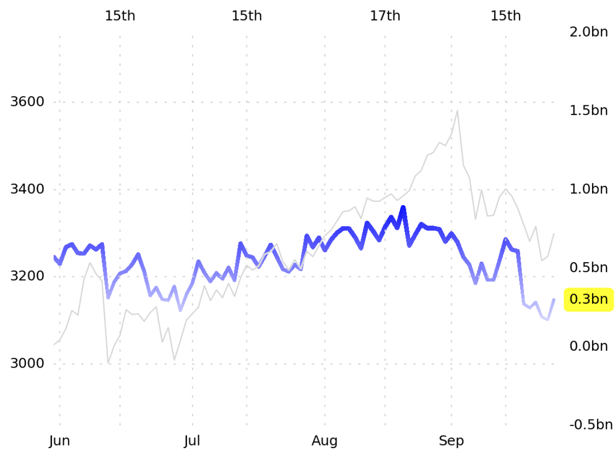


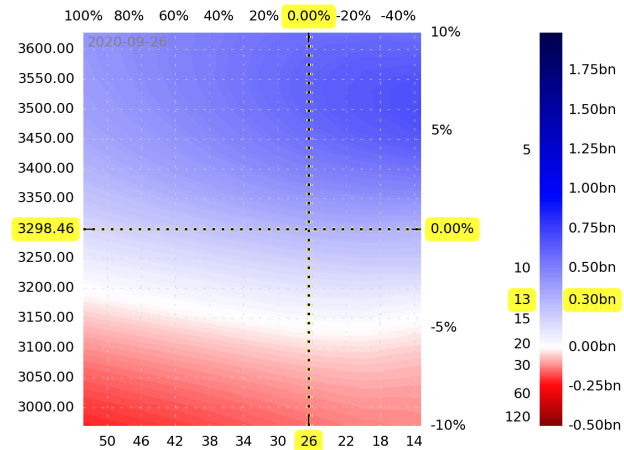
For the last couple weeks, we haven't been giving the output from our Juice algorithm, since the thing is still a mess of code and it was spitting some garbage output at us. We managed to track down the issues, though, and it's back up and running. For the 1-week densities above, the algo tells us that we can get a **3.79%** average rate of return by selling the 3320-centered, 100-wide iron fly for Friday (**+3220p -3320p -3320c +3420c**).

That would be achieved by selling 79 SPX spreads per $1mm in portfolio value. This full-Kelly optimization is betting nearly 1/3 of bankroll to achieve that average 3.79% weekly rate of return, so always keep that in mind. Even when you have an edge, 3.79% in weekly gains doesn't come easy. Also, place this in the context of prior rates of return (10%+) that we've derived from these weekly probability densities. This isn't really all that impressive -- a modest edge.

(As we've said many times before, you should usually expect to see very little in short vol edge when the 1-day densities "agree" like they do above. From a "pure volatility" standpoint, GEX+ is basically agreeing with the market's 1-day expectations, so we probably don't have a "volatility edge" here. What we do have is a mean-reversion edge. So don't expect that you can make money by being short vol via daily delta-hedged options this week.)

Anyhoo, GEX+ is about $300mm, and the illiquid red-zone is still around 5% away from spot.



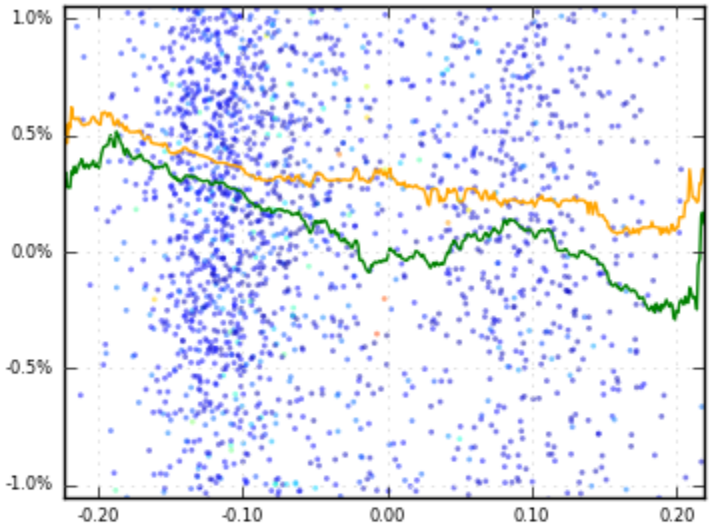


This is a pretty healthy-looking liquidity scenario. Crash risk still very low at 1.13x. Nothing exciting.

SUMO Redux

This seems to be the idea: When there are folks buying puts (net short delta) in SPX, that's *supportive* of index prices, and when people are selling puts (net long delta), that can give a short-term boost to index prices -- *momentum* -- but it's not all that robust. Perhaps most interesting is that when buying and selling nets out, there's neither support nor momentum, and that portends mean negative returns on all timeframes from 1 day to 1 month.

We've reframed the data from last week, where we were looking at "dollar delta per contract," which is not normalized through time. In the plot below, we attempted to normalize to delta itself. I.e., "what's the 'net put delta' of all put volume for the day?" You can see on the x-axis that SPX put volume has had its net daily deltas range from -0.20 to 0.20 from 2004 to present. The y-axis is 1-week % returns. Green is the mean return, orange is the median.



The dearth of data to the right of the plot (>0.10) is deceiving -- when normalized for volatility, mean returns are modestly positive when net put deltas are positive. This is why we felt comfortable portraying positive net delta as "momentum." For now, anyway.

What's clear is that the deeper negative deltas are substantially supportive of price, and this holds on all timeframes. Similarly with the net zero delta zone: It's always bearish. And if we can indeed predict 0.5% mean gains in low-volatility markets on a weekly timeframe (most of these returns are in low-vol markets), we have the beginning of a *very* useful indicator here.

More exploration next Sunday, and hopefully a fuller picture of what's going on here. Looking good so far.

Oh, and we're around -0.07 on the x-axis of the plot above, in case you were wondering. Modest mean positive 1-week returns. We'll see about that.

Enjoy the week!

The SqueezeMetrics Team